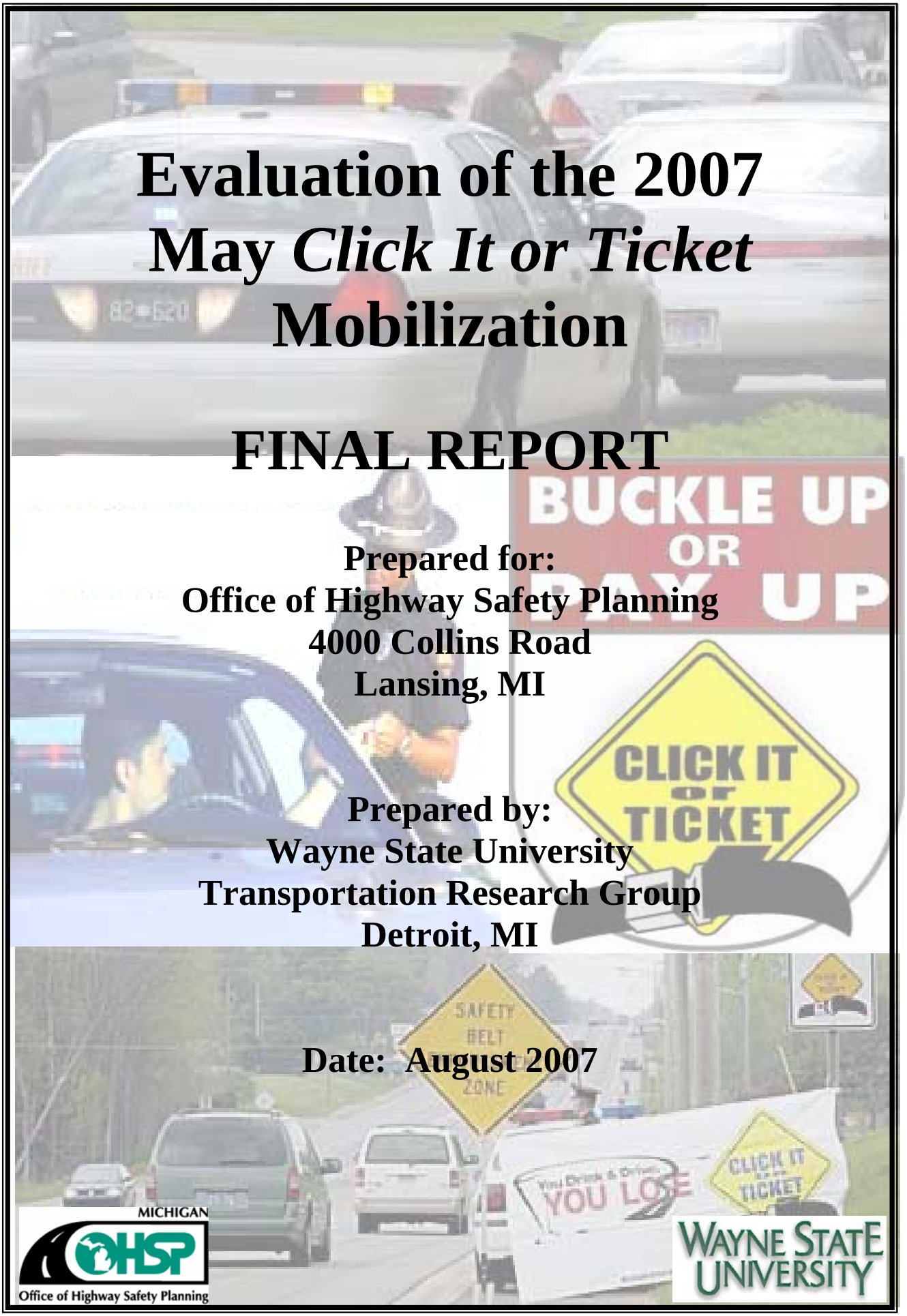
Evaluation of the 2007 May *Click It or Ticket* Mobilization

FINAL REPORT



Prepared for:
Office of Highway Safety Planning
4000 Collins Road
Lansing, MI

Prepared by:
Wayne State University
Transportation Research Group
Detroit, MI

Date: August 2007

MICHIGAN OHSP Office of Highway Safety Planning

WAYNE STATE UNIVERSITY

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16. Abstract This study reports the results of the evaluation of the Click It or Ticket public awareness and enforcement mobilization of 2007. Two waves of observational surveys were conducted as a part of this study, statewide pre-enforcement and statewide post-enforcement. One hundred ninety-two (192) intersection/ interchange sites were used for the statewide survey. All drivers and front-seat passengers were observed for safety belt use and categorized by vehicle type, vehicle use, gender, age and race. Prior to the enforcement campaign, statewide safety belt use was 93.0 percent and the use rate increased to 93.3 percent following the enforcement and public awareness campaign. Although the Click It or Ticket campaign improves safety belt usage, males and pick-up truck drivers continue to trail in the use of safety belts and should be targeted in future programs.			
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1.0 INTRODUCTION

Increasing the use of safety restraint systems, while driving or traveling as a passenger in an automobile, is one of the most effective and cost-effective ways of reducing injuries and fatalities on the nation's highways. Efforts have been made to increase the use of safety belts over three decades, yet according to the 2006 nationwide safety belt surveys, approximately 19 percent of the drivers and front-seat passengers do not buckle up while driving or riding as a front-seat passenger in an automobile in 2006 [1]. In Michigan, past statewide safety belt use studies indicate that the overall use by drivers and front-seat passengers has been increasing consistently over the past six years. The past seven years' experience is as follows:

2000 - 83.5%

2001 - 82.3%

2002 - 82.9%

2003 - 84.8%

2004 - 90.5%

2005 - 92.9%

2006 - 94.3%

The above data indicates that the safety belt use rate in Michigan is far ahead of the national average and is one of eleven states and territories with reported safety belt use rates greater than 90 percent [1]. It is important to recognize that Michigan is a "primary law" state, which means a motorist can be stopped and cited for the sole reason of not wearing a safety belt while driving or riding as a front-seat passenger. In "secondary law" states, motorists must be stopped for another traffic-related offense in order to be ticketed for not wearing a safety belt. The "primary law" states averaged a safety belt use percentage of 85.6 percent as compared to the "secondary law" states, which only averaged 77.8 percent in 2006 [2].

The use of safety belts is the single most effective means of reducing fatal and non-fatal injuries in vehicular crashes. The reduction in the severity of injuries has proven to be linked to the use of safety belts by many studies in the past. In 2005, 31,415 passenger vehicle occupants were

killed in traffic crashes in the USA, of which, the safety belt use rate was known for 29,186 occupant fatalities. For these fatalities where safety belt use was known, approximately 55 percent of the occupants were not utilizing their safety belts [3]. The National Highway Traffic Safety Administration (NHTSA) estimates that an 80 percent safety belt use rate can save more than 15,000 lives per year and an overall societal cost of 50 billion dollars in the country each year [4]. The NHTSA established that 195,382 lives have been saved between 1975 and 2004 due to the use of safety belts [5].

Currently, airbag systems are a part of standard equipment in all vehicles. Vehicles equipped with airbags need the occupants to be restrained by safety belts in order to be effective in saving lives and reducing injuries in the event of a severe crash. Safety belts protect vehicle occupants in the following ways:

- Reduces the chance of being in contact with the interior of the vehicle,
- Prevents the occupants from ejection, and
- Prevents occupants from being too close to the deployed airbags, thus avoiding severe injuries from the airbags, ejection from the vehicle and vehicle interior contacts.

Past research indicates that the use of safety belts reduces the risk of fatal injury for the driver and front seat passengers by approximately 45 percent for passenger vehicles and 60 percent for light trucks. Moreover, the use of safety belts reduces the risk of moderate to critical injury by 50 percent for occupants of passenger vehicles and 65 percent for the occupants of light trucks [5]. Therefore, a small increase in safety belt use often results in a large overall savings to society.

The non-use of safety belts is a behavioral issue, so programs targeted to change driver behavior related to the use of safety belts often leaves a long lasting impact on the affected drivers and thus, continues to increase the safety belt use rate in the driving population. Various safety belt use improvement programs are often targeted to specific areas within a state. Knowing the areas within a state that have lower safety belt use rates may assist the program coordinators in the

Office of Highway Safety Planning (OHSP) to allocate enforcement funding to specific areas, which may result in higher rates of safety belt use. There are, of course, statewide initiatives, which are expected to impact the entire state. The safety belt use data can be used for the following:

- To fulfill reporting requirements to NHTSA.
- To allocate statewide safety funding to specific program areas.
- To provide targeted funding to specific areas within the state where use rates are lower than the statewide average.
- To provide targeted programs for certain segments of the population.

In order to promote safety belt usage, the Office of Highway Safety Planning (OHSP) participates in a national safety belt/law enforcement mobilization program entitled, "Click It or Ticket". This program is held around Memorial Day each year and involves an intense statewide publicity campaign and establishing special safety belt enforcement zones at selected locations in various counties of the state. The deployment of this mobilization over holiday periods is an effective way to reach a large number of drivers over a short period of time. Many people throughout the State of Michigan travel a long distance for recreational purposes during the holidays and may have different driving behavior as compared to their typical daily utilitarian commute. Many drivers may experience additional distractions, such as traveling with multiple passengers or towing large loads like boats, trailers or other heavy loads. This may alter their typical driving habits resulting in increased safety belt non-use and may also impact their perception of risk to hazardous situations. Additionally, during holiday periods more drivers on the road may be under the influence of alcohol, which places them and other road users at even a higher risk. This makes the use of safety belts extremely important in saving lives and reducing motorist injuries during the heightened risks associated with recreational travel.

For a two week period from May 21, 2007 to June 3, 2007, police officers from approximately 200 agencies patrolled more than 800 designated safety belt enforcement zones in 55 of

Michigan's 83 counties [6]. These police officers issued 18,436 citations for motorists who were not properly buckled [7]. This is a decrease from the 23,062 citations that were issued in 2006 [8].

1.1 Study Purpose and Objectives

The purpose of this study was to perform a 'before' and an 'after' enforcement observational survey and an annual observational survey for 192 intersections/interchanges to determine the percentage of drivers and front-seat passengers utilizing their safety belts.

The specific objectives of this study were as follows:

- Finalize the methodology for collecting data for a representative sample of sites throughout the State, which ensured reliable statewide statistics, in an economically feasible manner.
- Provide training to all staff conducting the observation surveys and conduct Quality Assurance/Quality Control (QA/QC) of the data collection efforts.
- Conduct "before" and "after" observational surveys of safety belt use during the *Click It or Ticket* mobilization.
- Summarize and cross-tabulate the observational data in a spreadsheet format indicating overall safety belt use, safety belt use by stratum, safety belt use by time of day and day of week, and safety belt use by demographic characteristics.
- Continue to track the changes in safety belt use and the effectiveness of the *Click It or Ticket* mobilization program. Generate necessary comparative data and statistical analyses to access the relevancy of the 2007 observational data and results to previous observational results.

1.2 Study Area

The study area for the statewide observational survey included the counties that represented at least 85 percent of the population in the State of Michigan.

2.0 METHODOLOGY

In order to develop targeted public awareness programs to increase safety belt use, one must know the distribution of safety belt use rates in various parts of the state and among various demographic groups, in addition to knowing the overall safety belt use rate in the state. It is, however, important to capture the statewide use rate following the sampling strategy and data collection procedure recommended by NHTSA. WSU-TRG performed such observational surveys in the state as a part of this project.

The site selection methodology for this study followed the procedure used in the Direct Observation of Safety Belt Use in Michigan surveys for the years 2000 to 2006. The uniform criteria, as presented in the Federal Register and the National Highway Traffic Safety Administration documents, were also examined carefully to ensure adherence to the nationwide standard. The methodology for the evaluation of the May *Click It or Ticket* project is the same as used in the 2005 and 2006 evaluation, which followed NHTSA's guidelines, resulting in the selection of areas in the state to encompass 85 percent of the population. The methodology used including location selection which was completed in the 2004 Evaluation of the May *Click It or Ticket* is described in the following paragraphs.

NHTSA requires that the areas surveyed throughout the state encompass 85 percent of the population. The areas selected for the observation survey included 32 counties in the State of Michigan that represented 86.86 percent of the state's population, based upon 2004 U.S. Bureau of Census Data estimates as shown in Table 1. This sample of counties selected for the evaluation study fulfills NHTSA's requirements and includes most of the 55 counties targeted for organized enforcement zones in the May 2007 *Click It or Ticket* Campaign. The geographic locations of the counties included in the evaluation study are depicted in Figure 1.

A system for partitioning the candidate counties into various strata, based vehicle miles traveled (VMT), was developed in the 2005 May *Click It or Ticket* Evaluation and is shown in Table 2. The number of observation sites for each stratum is also shown in Table 2. Forty-eight (48) sites were observed for Stratum 1, 50 sites for Stratum 2, 53 sites for Stratum 3, and 41 sites for Stratum 4. By using 192 sites, there is higher VMT strata, allowing for a more precise estimate of safety belt use. A complete listing of the 192 sites is provided in Appendix I.

Table 1. Population Data for the Selected Counties in Michigan
[Source: U.S. Census Bureau 2004 Estimates]

Name of County	Population	Percent Population	Cumulative Percent Population Statewide for Michigan	County Ranking by Population
Wayne	2,016,202	19.94%	19.94%	1
Oakland	1,213,339	12.00%	31.94%	2
Macomb	822,660	8.13%	40.07%	3
Kent	593,898	5.87%	45.94%	4
Genesee	443,947	4.39%	50.33%	5
Washtenaw	339,191	3.35%	53.69%	6
Ingham	280,073	2.77%	56.46%	7
Ottawa	252,351	2.50%	58.95%	8
Kalamazoo	240,724	2.38%	61.33%	9
Saginaw	209,062	2.07%	63.40%	10
Livingston	177,538	1.76%	65.16%	11
Muskegon	174,401	1.72%	66.88%	12
St. Clair	170,916	1.69%	68.57%	13
Berrien	163,125	1.61%	70.18%	14
Jackson	162,973	1.61%	71.80%	15
Monroe	152,552	1.51%	73.30%	16
Calhoun	139,067	1.38%	74.68%	17
Allegan	112,477	1.11%	75.79%	18
Bay	109,480	1.08%	76.87%	19
Eaton	107,056	1.06%	77.93%	20
Lenawee	101,768	1.01%	78.94%	21
Lapeer	92,510	0.91%	79.85%	22
Midland	84,615	0.84%	80.69%	23
Grand Traverse	82,752	0.82%	81.51%	24
Van Buren	78,541	0.78%	82.29%	25
Shiawassee	73,125	0.72%	83.01%	26
Clinton	68,800	0.68%	83.69%	27
Marquette	64,874	0.64%	84.33%	28
Isabella	64,481	0.64%	84.97%	29
Ionia	64,378	0.64%	85.60%	30
Montcalm	63,627	0.63%	86.23%	31
St. Joseph	62,964	0.62%	86.86%	32
State of Michigan Total	**10,112,620**			

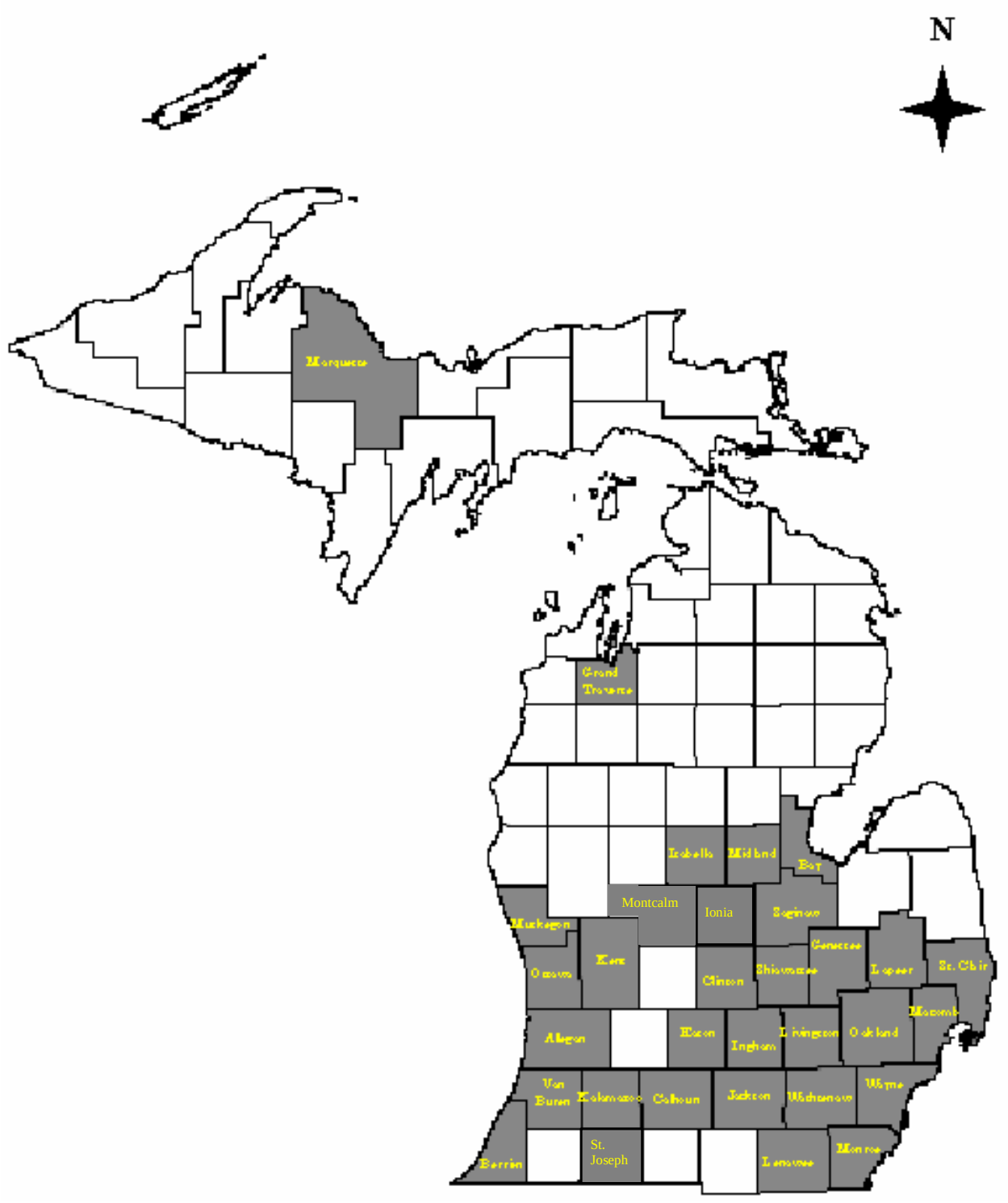

Figure 1. 32-County Statewide Sample for the Direct Observation Safety Belt Surveys

Table 2. 2004 Vehicle Miles of Travel by Stratum
[Source: Michigan Department of Transportation]

	VMT (2004) (in Thousands)	Total VMT (in Thousands)	Percent of Total VMT	Number of Sites
Stratum 1				
Ingham	2,589,095			
Kalamazoo	2,603,446			
Oakland	13,113,695			
Washtenaw	3,742,005			
Total Stratum 1 VMT		22,048,241	25.06%	48
Stratum 2				
Allegan	1,234,491			
Bay	1,325,042			
Eaton	1,189,516			
Grand Traverse	806,758			
Jackson	1,723,634			
Kent	5,773,450			
Livingston	1,954,324			
Macomb	6,527,891			
Midland	827,006			
Ottawa	2,077,284			
Total Stratum 2 VMT		23,439,396	26.64%	50
Stratum 3				
Berrien	2,180,694			
Calhoun	1,731,659			
Clinton	1,140,428			
Genesee	4,731,531			
Ionia	714,959			
Isabella	587,432			
Lapeer	892,081			
Lenawee	898,211			
Marquette	629,897			
Monroe	2,143,438			
Montcalm	589,027			
Muskegon	1,447,105			
Saginaw	2,259,369			
Shiawassee	779,541			
St. Clair	1,624,723			
St. Joseph	579,553			
Van Buren	1,000,428			
Total Stratum 3 VMT		23,930,076	27.19%	53
Stratum 4				
Wayne	18,575,126			
Total Stratum 4 VMT		18,575,126	21.11%	41
Total Strata VMT		**87,992,839**	**100%**	**192**

The locations of the 192 observation sites were randomly selected from intersections and limitd access highways. The sites were randomly chosen in the 2005 Evaluation of May *Click It or Ticket* using a method that ensured an equal probability for each location in each stratum being selected as a candidate study location. For the selection of the candidate locations, large equal scale (3/8 inch = 1 mile) road maps were obtained for each county. A computerized grid was overlaid on each county map at 0.5-mile intervals in the horizontal and vertical directions of the map. These squares represented a square area of 0.25 square miles. For the selection of intersection, each grid on the county map was assigned two numbers representing an X and Y coordinate and was also assigned a number by stratum. For each stratum, a random number was chosen between one and the number of grids covering the stratum. Then two additional random numbers were selected representing the X and Y coordinates of the selected grid. Random coordinates were chosen until an intersection was found located in the grid coordinates. This process was repeated until the required number of intersection observation sites were selected for all four strata. In addition, alternative secondary intersections were selected for each primary intersection. Secondary intersections were selected within a 16 square mile area from the primary intersection location. For the selection of observation sites along limited access highways, exit ramps were selected. This was done by sequentially numbering all the exit ramps on limited access highways located within each stata. Random numbers were then selected between one and the number of ramps to determine which exit ramps would be considered as candidate observation locations. An alternate exit ramp was also selected for each candidate observation location.

Upon the determination of the sites, the direction of traffic flow, day of the week and time of day at each observation location was determined through a similar random sampling method ensuring equal probability. For each intersection randomly selected, the direction of traffic flow for observation was also randomly selected. Random numbers between one and four were assigned for each primary and secondary intersection's direction of traffic movement. The selected random numbers represented "1" for eastbound, "2" for southbound, "3" for westbound and "4" for northbound. This process allowed a random selection of the direction of traffic flow as well as the roadway for inclusion in the observation study. In order to minimize the travel time and

distance required to conduct this study, the observation sites were clustered into geographic regions upon final selection without compromising the randomness of the data.

3.0 OBSERVATIONAL STUDY DATA COLLECTION

For each selected observation site, a minimum of 50 vehicles were observed in at least a 50-minute time frame. If 50 observations were not completed in 50 minutes, the observer stayed longer at the same location and collected safety belt use data until 50 observations were captured at that site. These observations were appropriately reweighted, as explained in the Data Analysis Section of this report. The data collected for the 192 observation sites provided an accurate representation for each day of the week and each hour of the day for the safety belt use characteristics of the state.

Only non-moving vehicles were observed at each site, due to the difficulty of accurately observing the safety belt use data while the target vehicle is moving. This included vehicles stopped at a stop sign or at a red light of a traffic signal. Since it is not possible to accurately observe all vehicles passing the observation site, while collecting the safety belt use data, a 10-minute traffic count of all vehicles passing the observation point was the basis for estimating the number of vehicles passing the observation site per unit of time. This data introduced a weighting factor for each observation site. The 10-minute count was collected in two 5-minute intervals; five minutes prior to the observational period and five minutes following the observational period.

Data collection for the "before" enforcement zone mobilization program occurred between May 2, 2007 and May 15, 2007. Data collection for the "after" enforcement zone mobilization program occurred between June 4, 2007 and June 18, 2007.

The driver of each vehicle and the passenger in the front right seat of the vehicle were observed for safety belt use, non-use and misuse. The driver belt observational categories included Not Belted, Belted, Shoulder Belt Under Back, and Should Belt Under Arm. The passenger belt categories were the same as the driver belt categories and also included the observation of child

seats when present in the front passenger seat. In the surveys, both the driver and front-seat passenger were separately identified based upon their gender, estimated age and race. The driver age categories included 16-29, 30-59, and 60 and over. The passenger age categories included 0-3, 4-15, 16-29, 30-59, and 60 and over. The driver and passenger races were categorized as Caucasian, African American, Asian or Pacific Islander, Hispanic, and Native American. The vehicles were categorized into four groups: Passenger Vehicles, Sport Utility Vehicles, Vans or Minivans, and Pick-up Trucks. The vehicles were also identified as being Commercial or Non-commercial vehicles.

The data collected in the field was recorded and returned to the office; observations were manually recorded on survey forms and returned back to the office within 24 hours of the data collection. This manual method was chosen due to concerns with computer screen visibility in sunlight or rainy conditions. The WSU-TRG believes that the manual method also increases the accuracy and data verification at the time of data entry.

4.0 OBSERVER TRAINING

Members of the WSU-TRG staff participated in the data collection for this project. Each of these staff members has or is pursuing an engineering degree and has been trained in general traffic data collection methods and procedures. For this project, each data collector received specific training composed of a day-long workshop, technical assistance, and field data collection exercises. Each member of the data collection team participated in a reliability and repeatability study to reach a 95 percent or greater reliability and repeatability in their field data collection tests prior to being deployed for the data collection for this project. The repeatability of a measurement depends on the within-subject standard deviation, which can be calculated using a sample of closely repeated measurements. The repeatability coefficient is simply the within-subject standard deviation adjusted by a probability-based factor and is an estimate of the maximum difference likely to occur between two successive measurements on the same subjects. Reliability concerns the extent to which repeated measurements by the same method on the same subject produce the same result.

The reliability and repeatability study was performed at one of the selected sample intersections for this project, Woodward Avenue and Warren Avenue, near the Wayne State University campus in Detroit, Michigan. This intersection represents a typical high volume intersection that could be challenging for observational data collection. For two hours, two observers were randomly paired and assigned to collect safety belt observational data for one direction of traffic flow at the selected intersection. Although the observers were observing the same traffic flow direction, they did not interact and did not necessarily observe the same vehicles. They were located physically apart to ensure the independence of their data collection.

The data was then summarized for each paired individual to determine the accuracy of their observations. Accuracy for each data collection entity was calculated greater then 95 percent. This training was given to the data collectors approximately two months prior to the first wave of field data collection. Upon completion of the training for the data collection, each member of the team received a training manual composed of the information received during the training session, the schedule of data collection and all necessary field supplies.

Two field supervisors monitored the performance of the field observers. In order to establish a baseline reference of 'expected' safety belt use rates, preliminary observation data from previous studies was obtained for each stratum. The field data collectors submitted their observation data on a daily basis and it was immediately entered and compiled on computer spreadsheets at our WSU campus office. Comparisons were then made between the observed rates and the 'expected' safety belt use rates during the first statewide survey in order to identify any unexpected deviations in the data. Deviations were not found to be substantially different than anticipated.

5.0 DATA ANALYSIS

The data collected in the field was computerized by a team member and verified for accuracy. Rates for safety belt use were determined for each survey stratum, county, location, etc., as well as the statewide average. A 95 percent confidence interval for the estimate of safety belt use was determined in order to meet the guidelines of NHTSA.

5.1 Weighted Safety Belt Use Calculations

The weighting by the number of vehicles observed with the total possible number of vehicles passing the observation point has been performed as described in the following calculations. First the number of vehicles observed at each intersection by the length of the observation time and then multiplying that value by a standard 50-minute observational period. This calculation provides the total number of vehicles that passed the observation point in a standard 50-minute period. The number of vehicles observed in the 10-minute volume count was then multiplied by 5 to represent the total number of vehicles available for observation. The total number of vehicles was then divided by the adjusted number of vehicles observed passing the observation point. The resulting factor was the volume weighting factor for that particular intersection. The total number of drivers and passengers belted and not belted were then multiplied by the weighting factor to obtain the total number of weighted drivers and passengers that were belted and not belted. The weighted overall safety belt use rate by stratum was then determined by dividing the total number of belted drivers and passengers by the total number of drivers and passengers. The following calculations further describe the procedure outlined above.

Jackson County, Wolf Lake Road and Cady Road Intersection

Survey length = 85 minutes

Number of vehicles observed in 85 minutes = 51 vehicles

10-minute volume count = 8 vehicles

Standard 50-minute observational frequency (Adjusted number of vehicles) =

$$\frac{Number\ of\ Vehicles\ Observed}{Survey\ Length} \times 50\ minutes = \frac{51\ vehicles}{85\ minutes} \times 50\ minutes = 30\ vehicles\ in\ 50\ minutes$$

Total number of vehicles available for observation = 10-minute vehicle count x 5 =

8 vehicles x 5 intervals = 40 vehicles in 50 minutes

Intersection volume weighting factor = $\frac{Total\ Number\ of\ Vehicles}{Adjusted\ Number\ of\ Vehicles} = \frac{40}{30} = 1.33$

The variance for each stratum was determined by following Cochran's equation [9] as follows:

$$Variance = \frac{n}{n-1}\sum_i \left(\frac{g_i}{\sum g_k}\right)^2 (r_i - r)^2 \qquad [9]$$

Where.

n = number of observation locations

g_i = number of observations at each location

g_k = total number of observations within a stratum

r_i = safety belt use rate for each strata

r = overall safety belt use rate

5.2 Overall Statewide Safety Belt Use Calculations

The weighted safety belt use rate was calculated by summing up the strata safety belt use rates, each multiplied by a vehicle miles of travel weighting factor for that stratum, divided by the sum of the vehicle miles of travel weighting factor. The 2005 vehicle miles of travel from the Michigan Department of Transportation as shown in Table 3 were used for these calculations. The four vehicle miles of travel totals were compared and Stratum 3 had the highest total, 24,143,670 thousand, and was assigned a factor of 1.0. The other three strata's weighting factors were determined by dividing the vehicle miles of travel for that stratum by Stratum 3's vehicle miles of travel. Stratum 1 was assigned a weighting factor equal to 0.93 (22,395,310 VMT divided by 24,143,670 VMT). Stratum 2 was assigned a weighting factor equal to 0.99 (23,826,636 VMT divided by 24,143,670 VMT). Stratum 4 was assigned a weighting factor equal to 0.79 (19,126,505 VMT divided by 24,143,670 VMT). The total weighting factors equaled 3.71.

The overall statewide variance was calculated in a similar manner as the overall statewide safety belt use rate. The overall statewide variance was found by summing the product of each stratum's variance by the squared weighting factor and divided by the sum of the squared weighting factors.

Table 3. 2005 Vehicle Miles of Travel by Stratum
[Source: Michigan Department of Transportation]

	VMT (2005) (in Thousands)	Total VMT (in Thousands)
Stratum 1		
Ingham	2,625,148	
Kalamazoo	2,591,189	
Oakland	13,404,441	
Washtenaw	3,774,532	
Total Stratum 1 VMT		**22,395,310**
Stratum 2		
Allegan	1,257,567	
Bay	1,334,442	
Eaton	1,176,247	
Grand Traverse	772,081	
Jackson	1,742,254	
Kent	5,985,114	
Livingston	2,030,067	
Macomb	6,673,529	
Midland	839,488	
Ottawa	2,015,847	
Total Stratum 2 VMT		**23,826,636**
Stratum 3		
Berrien	2,170,115	
Calhoun	1,736,733	
Clinton	1,181,776	
Genesee	4,818,106	
Ionia	723,027	
Isabella	589,695	
Lapeer	889,313	
Lenawee	891,599	
Marquette	621,616	
Monroe	2,086,037	
Montcalm	591,281	
Muskegon	1,542,728	
Saginaw	2,257,216	
Shiawassee	790,294	
St. Clair	1,666,026	
St. Joseph	575,648	
Van Buren	1,012,460	
Total Stratum 3 VMT		**24,143,670**
Stratum 4		
Wayne	19,126,505	
Total Stratum 4 VMT		**19,126,505**
	Total Strata VMT	**89,492,121**

The 95 percent confidence interval is equal to the weighted safety belt use rate plus/minus 1.96 (for the Z-test at alpha = 0.05) multiplied by the square root of the stratum's or statewide variance expressed as a percent. The standard error is equal to the square root of the variance. The relative error must be less than five percent according to NHTSA guidelines and is equal to the standard error divided by the weighted statewide safety belt use rate.

The data was also analyzed and compared with studies from previous years to assess the progress of the safety belt campaign by the State of Michigan.

6.0 RESULTS AND CONCLUSIONS

6.1 Statewide Observational Surveys

The observational survey for the pre-enforcement statewide sample was performed between Monday, April 30th and Sunday, May 13th of 2007. During this observation period, a total of 19,913 observations were made at 192 observation sites randomly selected to represent statewide safety belt use. In comparison with the 2006 sample, 1,651 more observations were made in 2007.

The observational survey for the post-enforcement statewide sample was performed between Sunday, June 3rd and Saturday, June 16th of 2007. During this observation period, 24,553 observations were made at the same 192 sites. In comparison with the 2006 sample, there were 4,081 more observation made in 2007.

The overall weighted statewide safety belt use rates are shown in Table 4. The overall weighted statewide safety belt use rates were calculated based upon the procedure described in the "Overall Statewide Safety Belt Use Calculations" section in the Data Analysis section of the report. The weighted percent of safety belt use referenced in the summary tables has been

calculated per the "Weighted Safety Belt Use Calculations" as detailed in the Data Analysis section of this report.

Table 4. Statewide Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers

Observational Wave	Safety Belt Use Rate	Standard Error	Relative Error
Pre-Enforcement	93.0% ± 0.78%	0.40%	0.43%
Post-Enforcement	93.3% ± 0.60%	0.31%	0.33%

The findings for the statewide observational surveys for the strata are shown in Table 5. Additional breakdowns of the safety belt use rates and standard error at a county level are provided in Appendix II. Complete details of the observations on an intersection level are provided in Appendix III.

Table 5. Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers by Stratum

Stratum	Pre-Enforcement Safety Belt Use Rate		Post-Enforcement Safety Belt Use Rate	
	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error
Stratum 1	92.4% ± 1.55%	0.79%	94.3% ± 1.18%	0.60%
Stratum 2	93.7% ± 1.26%	0.64%	94.5% ± 0.77%	0.39%
Stratum 3	90.5% ± 2.03%	1.04%	92.7% ± 1.59%	0.81%
Stratum 4	95.9% ± 0.92%	0.47%	91.3% ± 1.02%	0.52%

* Weighted Safety Belt Usage ± 95% Confidence Band

Table 6 summarizes the descriptive statistics regarding the observational surveys for the vehicles, in terms of day of the week and time of the day for each of the statewide observational surveys.

Table 6. Statewide Descriptive Statistics

Day of the Week	Pre-Enforcement				Post-Enforcement			
	No. of Sites Observed	Percent of Sites in Day of Week	Actual Total No. of Observa-Tions (Vehicles)	Percent of Observa-tions in Day of Week (Vehicles)	No. of Sites Observed	Percent of Sites in Day of Week	Actual Total No. of Observa-tions (Vehicles)	Percent of Observa-tions in Day of Week (Vehicles)
Sunday	22	11.5%	1,780	11%	20	10.4%	1,789	9%
Monday	24	12.5%	1,836	11.4%	29	15.1%	3,101	15.5%
Tuesday	25	13%	1,899	11.8%	30	15.6%	2,622	13.1%
Wednesday	39	20.3%	3,302	20.5%	39	20.3%	4,042	20.3%
Thursday	39	20.3%	3,541	21.9%	36	18.8%	4,621	23.2%
Friday	16	8.3%	1,358	8.4%	15	7.8%	1,612	8.1%
Saturday	27	14.1%	2,420	15%	23	12%	2,156	10.8%
Total	**192**	**100%**	**16,136**	**100%**	**192**	**100%**	**19,943**	**100%**
Time of the Day	**Pre-Enforcement**				**Post-Enforcement**			
	No. of Sites Observed	**Percent of Sites in Time of Day**	**Actual Total No. of Observa-tions (Vehicles)**	**Percent of Observa-tions in Time of Day (Vehicles)**	**No. of Sites Observed**	**Percent of Sites in Time of Day**	**Actual Total No. of Observa-tions (Vehicles)**	**Percent of Observa-tions in Time of Day (Vehicles)**
7 am – 8 am	4	2.1%	458	2.8%	4	2.1%	486	2.5%
8 am – 9 am	5	2.6%	401	2.5%	7	3.6%	764	3.8%
9 am – 10 am	21	10.9%	1,788	11.1%	20	10.4%	1,950	9.8%
10 am – 11 am	8	4.2%	9,73	6%	24	12.5%	2,511	12.6%
11 am – 12 pm	26	13.5%	1,965	12.2%	20	10.4%	1,860	9.3%
12 pm – 1 pm	22	11.5%	1,900	11.8%	26	13.5%	2,402	12%
1 pm – 2 pm	23	12%	1,744	10.8%	22	11.5%	2,148	10.8%
2 pm – 3 pm	25	13%	1,856	11.5%	28	14.6%	3,192	16%
3 pm – 4 pm	21	10.9%	1,630	10.1%	17	8.9%	1,879	9.4%
4 pm – 5 pm	19	9.9%	1,806	11.2%	14	7.3%	1,592	8%
5 pm – 6 pm	16	8.3%	1,459	9%	10	5.2%	1,159	5.8%
6 pm – 7 pm	2	1.1%	156	1%	0	0%	0	0%
Total	**192**	**100%**	**16,136**	**100%**	**192**	**100%**	**19,943**	**100%**

The safety belt use rate can be described for the statewide surveys by the overall use rate, by stratum, by vehicle type and by various demographics. Table 7 summarizes pre and post-enforcement safety belt use rate for the statewide survey by driver, front-seat passenger and total observations. As shown in Table 7, driver safety belt use decreased by 1.1 percent and front-seat passenger safety belt use increased by 2.0 percent. The amount of safety belt misuse between the two surveys amounts to a very small percentage of overall use. It should be noted that the weighted safety belt use rates provided in Table 5 and Tables 7 through 18 vary from those provided in Table 4. The overall statewide weighted safety belt use percentages provided in Table 4 are calculated by weighting the safety belt use rates by VMT by stratum (as described in Section 5.2 Overall Statewide Safety Belt Use Calculations). The weighted safety belt use rates provided in Table 5 and Tables 7 through 18 are calculated by utilizing the intersection weighting factors (as described in Section 5.1 Weighted Safety Belt Use Calculations). As the data presented in Table 5 and Tables 7 through 18 are not subdivided by county or strata, the overall state weighted safety belt use rates utilizing the VMT calculation are not applicable.

Table 7. Statewide Safety Belt Use Summary

Driver Belt Use	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs. (Drivers Only)	Weighted Total # of Obs. (Drivers Only)	Weighted % of SBU (Drivers Only)	Actual Total # of Obs. (Drivers Only)	Weighted Total # of Obs. (Drivers Only)	Weighted % of SBU (Drivers Only)
Not Belted	1,029	3,233	5.5%	1,300	3,487	6.4%
Belted	15,064	55,002	94.2%	18,556	50,348	93.1%
Belted Under Arm	30	101	0.2%	66	194	0.4%
Belted Behind Back	13	44	0.1%	21	59	0.1%
Total	**16,136**	**58,380**	**100%**	**19,943**	**54,088**	**100%**

Table 7. Statewide Safety Belt Use Summary (Continued)

Passenger Belt Use	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs. (Passengers Only)	Weighted Total # of Obs. (Passengers Only)	Weighted % of SBU (Passengers Only)	Actual Total # of Obs. (Passengers Only)	Weighted Total # of Obs. (Passengers Only)	Weighted % of SBU (Passengers Only)
Not Belted	260	819	6.6%	311	843	7.2%
Child Seat	7	25	0.2%	29	159	1.4%
Belted	3,491	11,559	92.8%	4,237	10,702	90.8%
Belted Under Arm	9	19	0.1%	18	40	0.3%
Belted Behind Back	10	40	0.3%	15	40	0.3%
Total	**3,777**	**12,462**	**100%**	**4,610**	**11,784**	**100%**
Total Belt Use	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)
Not Belted	1,289	4,052	5.7%	1,611	4,330	6.6%
Child Seat	7	25	0.1%	29	166	0.2%
Belted	18,555	66,561	93.9%	22,793	61,043	92.7%
Belted Under Arm	39	120	0.2%	84	234	0.3%
Belted Behind Back	23	84	0.1%	36	99	0.2%
Total	**19,913**	**70,842**	**100%**	**24,553**	**65,872**	**100%**

Table 8 summarizes the statewide driver and front-seat passenger safety belt use rates for pre and post-enforcement campaigns by stratum and county. In Table 8, the counties are listed by stratum. Strata 1, 2, and 3 experienced an increase in safety belt use, with Stratum 3 experiencing the highest improvement of 2.2 percent. Stratum 4, or Wayne County, experienced a 4.6 percent decrease in safety belt use from the pre-enforcement survey to the post-enforcement survey. Because of the relatively low number of sites and/or observations in many counties, the safety belt use rates listed may not be fully representative of each county. The use rates indicated are the weighted average of the observations taken in each county.

Table 8. Statewide Safety Belt Use Rates by Stratum and County

Stratum 1	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)
Ingham County	1,468	3,063	93.9%	1,655	5,258	94.5%
Kalamazoo County	836	1,765	95.2%	1,836	2,579	93.6%
Oakland County	1,281	5,851	89.6%	1,595	4,500	92.1%
Washtenaw County	1,123	4,569	93.9%	931	4,815	96.6%
Total	**4,708**	**15,248**	**92.4%**	**6,017**	**17,152**	**94.3%**
Stratum 2	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)
Allegan County	360	896	93.4%	682	675	94.9%
Bay County	312	254	90.3%	359	454	92%
Eaton County	711	1,395	95%	809	1,628	96.9%
Grand Traverse County	208	614	92.9%	196	783	96.9%
Jackson County	858	1,166	91.1%	667	936	95.5%
Kent County	1,208	2,596	91.6%	1,163	2,625	94.2%
Livingston County	681	1,406	93%	786	1,245	93.3%
Macomb County	704	4,017	96.7%	1,282	3,025	94.1%
Midland County	373	313	88.8%	388	586	88.7%
Ottawa County	160	200	87.5%	170	131	96.7%
Total	**5,575**	**12,857**	**93.7%**	**6,502**	**12,088**	**94.5%**

Table 8. Statewide Safety Belt Use Rates by Stratum and County (Continued)

Stratum 3	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)
Berrien County	356	428	88.1%	275	587	95.7%
Calhoun County	519	1,088	94.3%	447	844	97.3%
Clinton County	474	573	89.9%	439	542	94.2%
Genesee County	421	1,484	82.5%	676	1,760	94%
Ionia County	121	144	78.7%	170	316	86.1%
Isabella County	52	68	82.7%	89	186	77.5%
Lapeer County	179	697	92.1%	180	367	88.5%
Lenawee County	320	359	95.2%	188	623	80.8%
Marquette County	342	805	91.3%	322	322	94.9%
Monroe County	622	827	93.7%	518	1,119	92.3%
Montcalm County	168	322	82.9%	254	407	84.1%
Muskegon County	219	309	87.9%	263	298	93.6%
Saginaw County	77	37	94.8%	60	77	91.7%
Shiawassee County	178	322	93%	374	544	96.5%
St. Clair County	370	763	93.3%	332	680	95.5%
St. Joseph County	200	806	95.7%	195	980	94.8%
Van Buren County	333	594	93.4%	826	1,318	94.1%
Total	**4,951**	**9,626**	**90.5%**	**5,608**	**10,970**	**92.7%**
Stratum 4	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)	Actual Total # of Obs. (Drivers & Passengers)	Weighted Total # of Obs. (Drivers & Passengers)	Weighted % of SBU (Drivers & Passengers)
Wayne County	**4,679**	**33,111**	**95.9%**	**6,426**	**25,662**	**91.3%**

Tables 9 through 13 summarize occupant safety belt use for drivers and front-seat passengers by vehicle type for the day of the week, time of the day, gender, age and race for the statewide survey.

Table 9. All Vehicles Statewide Summary

Day of the Week	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Sunday	2,535	4,129	93.1%	2,511	4,269	94.9%
Monday	2,202	13,954	96%	3,759	13,899	92%
Tuesday	2,212	6,164	95.4%	3,091	9,563	94.3%
Wednesday	3,847	17,279	92.4%	4,732	15,587	92.6%
Thursday	4,200	17,209	94%	5,424	14,301	91.6%
Friday	1,736	3,185	92.2%	2,046	3,467	94.5%
Saturday	3,181	8,922	94%	2,990	4,786	95.1%
Total	**19,913**	**70,842**	**94%**	**24,553**	**65,872**	**92.9%**
Time of Day	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
7 am – 8 am	531	1,722	96.6%	565	1,774	92.1%
8 am – 9 am	470	2,108	96.7%	886	1,783	93.2%
9 am – 10 am	2,145	6,532	94.8%	2,316	5,381	92.3%
10 am – 11 am	1,235	4,960	94.8%	3,024	6,961	94%
11 am – 12 pm	2,401	7,107	93.8%	2,338	6,102	94.1%
12 pm – 1 pm	2,324	7,414	93.6%	3,008	7,121	93.1%
1 pm – 2 pm	2,154	6,258	92.9%	2,746	7,281	92.7%
2 pm – 3 pm	2,300	7,805	93%	3,886	11,005	93.8%
3 pm – 4 pm	1,983	7,669	94.7%	2,378	8,481	92.7%
4 pm – 5 pm	2,340	10,716	94.5%	1,915	5,478	92.3%
5 pm – 6 pm	1,812	7,098	91.7%	1,491	4,505	89.5%
6 pm – 7 pm	218	1,453	97.6%	-	-	0%
Total	**19,913**	**70,842**	**94%**	**24,553**	**65,872**	**92.9%**

Table 9. All Vehicles Statewide Summary (Continued)

Vehicle Type	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Passenger Cars	9,381	36,289	94.2%	11,578	32,343	93.2%
Sport Utility	3,879	13,721	94.9%	3,560	13,433	94.1%
Vans/Minivans	2,863	9,978	94.7%	4,919	9,657	94%
Pick-up Trucks	3,790	10,854	91.6%	4,496	10,439	89.5%
Total	**19,913**	**70,842**	**94%**	**24,553**	**65,872**	**92.9%**
Gender	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	10,894	38,379	92.9%	13,478	35,906	91.2%
Female	9,019	32,463	95.3%	11,075	29,966	95%
Total	**19,913**	**70,842**	**94%**	**24,553**	**65,872**	**92.9%**
Age	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
0-3	10	83	70.3%	27	150	95.3%
4-15	386	1,065	95%	481	1,365	90.2%
16-29	4,972	20,987	92.8%	5,505	14,900	89.7%
30-59	11,482	39,113	94.2%	15,371	41,325	94.2%
60+	3,063	9,594	96%	3,169	8,132	92.8%
Total	**19,913**	**70,842**	**94%**	**24,553**	**65,872**	**92.9%**
Race	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Caucasian	17,419	55,704	94.5%	21,432	53,275	93.6%
African American	1,951	12,080	91.3%	2,675	11,006	89.4%
Asian or Pacific	411	2,703	95.8%	260	1,095	92.4%
Hispanic	132	355	96.9%	185	494	95.1%
Native American	-	-	-	1	2	100%
Total	**19,913**	**70,842**	**94%**	**24,553**	**65,872**	**92.9%**

Table 10. Passenger Cars Statewide Summary

Day of the Week	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Sunday	1,163	1,949	94.1%	1,185	2,013	94.6%
Monday	1,114	7,667	96.1%	1,811	7,165	93.1%
Tuesday	1,040	3,152	96.5%	1,393	4,365	93.8%
Wednesday	1,800	8,848	92.5%	2,258	7,945	92.3%
Thursday	2,046	8,776	93.6%	2,549	6,973	92.3%
Friday	723	1,353	93%	883	1,538	95.4%
Saturday	1,495	4,544	94.3%	1,499	2,344	95.6%
Total	**9,381**	**36,289**	**94.2%**	**11,578**	**32,343**	**93.2%**
Time of Day	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
7 am – 8 am	276	907	97%	232	712	93.5%
8 am – 9 am	217	1,012	97.1%	419	848	95.8%
9 am – 10 am	950	3,315	97.2%	1,148	2,759	93.1%
10 am – 11 am	507	2,197	93.8%	1,341	3,291	94.9%
11 am – 12 pm	1,010	3,317	94.2%	1,077	2,822	94.7%
12 pm – 1 pm	1,092	3,754	93.5%	1,312	3,096	94.3%
1 pm – 2 pm	942	2,858	93.6%	1,354	3,861	93.3%
2 pm – 3 pm	1,101	3,938	91.9%	1,702	5,059	92.3%
3 pm – 4 pm	971	3,907	93.8%	1,230	4,613	92.8%
4 pm – 5 pm	1,247	6,205	94.9%	985	2,876	91.9%
5 pm – 6 pm	962	4,112	92.5%	778	2,406	89.7%
6 pm – 7 pm	106	767	98.5%	-		-
Total	**9,381**	**36,289**	**94.2%**	**11,578**	**32,343**	**93.2%**

Table 10. Passenger Cars Statewide Summary (Continued)

Gender	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	4,686	18,506	93%	5,745	16,106	91.6%
Female	4,695	17,783	95.4%	5,833	16,237	94.8%
Total	**9,381**	**36,289**	**94.2%**	**11,578**	**32,343**	**93.2%**
Age	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
0-3	5	62	60.1%	10	66	98.5%
4-15	153	432	93.2%	179	518	96.1%
16-29	3,004	12,917	93.1%	3,376	9,314	90.4%
30-59	4,588	17,372	94.5%	6,217	17,587	94.6%
60+	1,631	5,506	96.3%	1,796	4,858	93.4%
Total	**9,381**	**36,289**	**94.2%**	**11,578**	**32,343**	**93.2%**
Race	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Caucasian	7,885	26,996	95.1%	9,667	24,417	94.4%
African American	1,185	7,401	90.8%	1,672	6,978	89.1%
Asian or Pacific Islander	251	1,730	94.1%	155	679	90.1%
Hispanic	60	162	97.1%	84	269	96.7%
Total	**9,381**	**36,289**	**94.2%**	**11,578**	**32,343**	**93.2%**

Table 11. Sport Utility Vehicles Statewide Summary

Day of the Week	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Sunday	537	874	94.2%	471	809	97.4%
Monday	340	2,178	95%	733	2,626	91.5%
Tuesday	386	1,014	96.8%	606	2,081	95.8%
Wednesday	815	3,811	94.1%	1,013	3,232	95.1%
Thursday	833	3,498	96%	1,138	3,082	92.6%
Friday	347	678	91.7%	414	728	95.3%
Saturday	621	1,668	94.8%	544	875	95.1%
Total	**3,879**	**13,721**	**94.9%**	**4,919**	**13,433**	**94.1%**
Time of Day	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	**Weighted Total # of Obs.**	**Weighted Total # of Obs.**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
7 am – 8 am	90	292	99.3%	119	402	87.8%
8 am – 9 am	105	490	97.4%	224	451	95.1%
9 am – 10 am	431	1,336	91.1%	438	1,046	95.8%
10 am – 11 am	290	1,137	95.2%	586	1,314	95.4%
11 am – 12 pm	485	1,465	96.5%	526	1,459	93.4%
12 pm – 1 pm	485	1,544	96.8%	623	1,651	95%
1 pm – 2 pm	409	1,315	92.9%	467	1,163	94.8%
2 pm – 3 pm	402	1,435	95.9%	804	2,245	96.3%
3 pm – 4 pm	373	1,459	96.9%	483	1,696	92%
4 pm – 5 pm	432	1,806	92.3%	356	1,061	94.5%
5 pm – 6 pm	334	1,227	95%	293	945	89.4%
6 pm – 7 pm	43	215	94.7%	-	-	-
Total	**3,879**	**13,721**	**94.9%**	**4,919**	**13,433**	**94.1%**

Table 11. Sport Utility Vehicles Statewide Summary (Continued)

Gender	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	1,823	6,698	94.3%	2,283	6,256	96.3%
Female	2,056	7,023	95.5%	2,636	7,177	94.5%
Total	**3,879**	**13,721**	**94.9%**	**4,919**	**13,433**	**94.1%**
Age	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
0-3	1	10	100%	4	27	100%
4-15	82	238	94.3%	101	308	86%
16-29	867	3,752	93%	984	2,825	90.1%
30-59	2,450	8,176	95.8%	3,452	9,338	95.5%
60+	479	1,545	94.7%	378	935	94.7%
Total	**3,879**	**13,721**	**94.9%**	**4,919**	**13,433**	**94.1%**
Race	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Caucasian	3,451	11,226	95%	4,351	11,212	95.1%
African American	330	1,984	92.8%	500	2,018	89%
Asian or Pacific Islander	73	448	100%	34	131	90.8%
Hispanic	25	63	100%	34	72	88.9%
Total	**3,879**	**13,721**	**94.9%**	**4,919**	**13,433**	**94.1%**

Table 12. Vans/Minivans Statewide Summary

Day of the Week	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Sunday	327	519	93.5%	337	537	96.1%
Monday	319	2,068	96.5%	553	2,121	94%
Tuesday	249	717	96.3%	446	1,531	96.5%
Wednesday	605	2,470	92.9%	679	2,181	94.2%
Thursday	643	2,467	94.6%	805	2,006	90.8%
Friday	247	440	95.5%	298	493	92.5%
Saturday	473	1,297	94.5%	442	788	96.3%
Total	**2,863**	**9,978**	**94.7%**	**3,560**	**9,657**	**94%**
Time of Day	**Pre-Enforcement**			**Pre-Enforcement**		
	Actual Total # of Obs.	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
7 am – 8 am	85	287	95.9%	85	282	91.5%
8 am – 9 am	68	290	98%	100	206	87.4%
9 am – 10 am	344	944	95.1%	314	731	96%
10 am – 11 am	214	813	97.1%	521	1,192	93.7%
11 am – 12 pm	367	1,079	93.6%	367	1,053	96.9%
12 pm – 1 pm	317	988	91.7%	449	1,075	93.3%
1 pm – 2 pm	292	864	95.3%	376	997	96.3%
2 pm – 3 pm	327	1,026	94%	560	1,595	94.9%
3 pm – 4 pm	297	1,193	96.6%	339	1,239	93.1%
4 pm – 5 pm	285	1,288	96.5%	232	665	94.7%
5 pm – 6 pm	233	931	89.5%	217	622	87%
6 pm – 7 pm	34	275	96.3%	-	-	-
Total	**2,863**	**9,978**	**94.7%**	**3,560**	**9,657**	**94%**

Table 12. Vans/Minivans Statewide Summary (Continued)

Gender	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	1,374	4,624	93.4%	1,762	4,919	92.2%
Female	1,489	5,354	95.7%	1,798	4,738	95.9%
Total	**2,863**	**9,978**	**94.7%**	**3,560**	**9,657**	**94%**
Age	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
0-3	3	10	100%	6	38	100%
4-15	89	243	98.9%	117	347	94.8%
16-29	391	1,665	92.1%	349	974	88%
30-59	1,899	6,606	94.5%	2,530	6,929	94.9%
60+	481	1,454	97.4%	558	1,369	93.6%
Total	**2,863**	**9,978**	**94.7%**	**3,560**	**9,657**	**94%**
Race	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Caucasian	2,523	7,953	94.7%	3,140	8,004	93.9%
African American	268	1,687	94%	329	1,316	93.8%
Asian or Pacific Islander	48	271	96.6%	62	268	98.5%
Hispanic	24	67	97.7%	29	69	91.3%
Total	**2,863**	**9,978**	**94.7%**	**3,560**	**9,657**	**94%**

Table 13. Pick-up Trucks Statewide Summary

Day of the Week	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Sunday	508	787	89.2%	518	910	92.7%
Monday	429	2,041	96.4%	662	1,987	86.8%
Tuesday	537	1,281	91.1%	646	1,586	91.2%
Wednesday	627	2,150	88.3%	782	2,229	88.2%
Thursday	678	2,468	92.3%	932	2,240	88.6%
Friday	419	714	89%	451	708	92.8%
Saturday	592	1,413	91.6%	505	779	92.6%
Total	**3,790**	**10,854**	**91.6%**	**4,496**	**10,439**	**89.5%**
Time of Day	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
7 am – 8 am	80	236	92.6%	129	378	94.2%
8 am – 9 am	80	316	92.7%	143	278	86.7%
9 am – 10 am	420	937	91.7%	416	845	81.9%
10 am – 11 am	224	813	94.4%	576	1,164	90.4%
11 am – 12 pm	539	1,246	90.1%	368	768	89.6%
12 pm – 1 pm	430	1,128	91.1%	624	1,299	87.8%
1 pm – 2 pm	511	1,221	89.6%	549	1,260	86.3%
2 pm – 3 pm	470	1,406	92.2%	820	2,106	92.6%
3 pm – 4 pm	342	1,110	92.7%	326	933	92.7%
4 pm – 5 pm	376	1,417	94.1%	342	876	89.3%
5 pm – 6 pm	283	828	85.6%	203	532	91.9%
6 pm – 7 pm	35	196	98.7%	-	-	-
Total	**3,790**	**10,854**	**91.6%**	**4,496**	**10,439**	**89.5%**

Table 13. Pick-up Trucks Statewide Summary (Continued)

Gender	Pre-Enforcement			Post-Enforcement		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	3,011	8,551	91.2%	3,688	8,625	88.3%
Female	779	2,303	93.3%	808	1,814	95.3%
Total	**3,790**	**10,854**	**91.6%**	**4,496**	**10,439**	**89.5%**
Age	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
0-3	1	1	100%	7	19	68.4%
4-15	62	152	94.9%	84	192	72.4%
16-29	710	2,653	91.3%	796	1,787	86.6%
30-59	2,545	6,959	91.2%	3,172	7,471	91%
60+	472	1,089	94.5%	437	970	86.9%
Total	**3,790**	**10,854**	**91.6%**	**4,496**	**10,439**	**89.5%**
Race	**Pre-Enforcement**			**Post-Enforcement**		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Caucasian	3,560	9,529	91.8%	4,274	9,642	89.7%
African American	168	1,008	87.6%	174	694	85.3%
Asian or Pacific Islander	39	254	98.9%	9	17	100%
Hispanic	23	63	92.2%	38	84	98.8%
Native American	-	-	-	1	2	100%
Total	**3,790**	**10,854**	**91.6%**	**4,496**	**10,439**	**89.5%**

Overall, the occupants of sport utility vehicles have the highest safety belt use rates. Pick-up truck drivers and passengers have the lowest overall safety belt use rate of 91.6 percent during the pre-enforcement survey and 89.5 percent during the post-enforcement survey. During the 2005 campaign, the highest pick-up truck safety belt use rate of 89.4 percent was recorded and during the 2006 campaign the highest was 91.1 percent. In 2007, the highest safety belt use rate for pick-up trucks was 91.6 percent which is a 0.5 percent increase from 2006. In 2006, the highest van/minivan safety belt use rate of 94.8 percent was recorded. The usage rate has decreased for the van/minivan category by 0.1 percent in 2007 from the usage rate in 2006.

The safety belt use rates varied among the different days of the week and by time of day with mid-morning having slightly higher usage rates. Again, female occupants have higher use rates than their male counterparts by nearly 3 percent. The safety belt use percentages increased for the occupants between 4 to 15 years of age. The highest usage rate in 2006 was 90.1 percent which increased by nearly 5 percent to 95 percent in 2007. Occupants over the age of 60 years increased from 95.6 percent in 2006 to 96 percent in 2007. The safety belt use rate remained the same between the pre-enforcement and post-enforcement for occupants 30 to 59 years of age. In general, Caucasian and Hispanic occupants have slightly higher safety belt use rates than the African American and Asian or Pacific Islander occupants. The low sample of Native American occupants does not allow conclusions to be drawn regarding their usage. The ethnicity trends of 2007 are similar to those experienced in 2006.

Tables 14 through 18 summarize occupant safety belt use rates by vehicle type demographically subdivided by gender and age. Male pick-up truck occupants continue to have the lowest rates of safety belt use. African American males and females occupants have lower safety belt use rates than those Caucasian occupants, which have a large sample from which to draw conclusions.

Table 14. All Vehicles Statewide Demographic Summary

Demographic Data			All Vehicle Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	**Age**	**Race**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
Male	0-3	Caucasian	1	8	100%	13	82	95.1%
		Asian or Pacific Islander	1	11	0%	-	-	-
		Hispanic	-	-	-	1	6	100%
		Total	**2**	**19**	**42.1%**	**14**	**88**	**95.5%**
	4-15	Caucasian	189	480	96.5%	212	509	88.4%
		African American	14	64	90.6%	32	139	89.2%
		Asian or Pacific Islander	2	4	100%	8	31	90.3%
		Hispanic	3	7	100%	4	7	42.9%
		Total	**208**	**555**	**95.9%**	**256**	**686**	**88.2%**
	16-29	Caucasian	2,070	7,438	92.8%	2,473	5,884	90.5%
		African American	408	2,539	85.7%	466	1,892	77.2%
		Asian or Pacific Islander	65	407	99.8%	45	171	91.8%
		Hispanic	35	114	96.5%	40	96	99%
		Native American	-	-	-	1	2	100%
		Total	**2,578**	**10,498**	**91.4%**	**3,025**	**8,045**	**87.5%**
	30-59	Caucasian	5,668	17,449	93.2%	7,485	18,638	92.8%
		African American	562	3,521	90.6%	815	3,386	93.7%
		Asian or Pacific Islander	144	1,043	95.6%	78	368	88.9%
		Hispanic	47	128	96.1%	80	207	93.7%
		Total	**6,421**	**22,141**	**92.9%**	**8,458**	**22,599**	**92.9%**
	60+	Caucasian	1,626	4,861	96.1%	1,647	4,150	90.6%
		African American	46	234	91.9%	69	291	86.3%
		Asian or Pacific Islander	12	69	100%	9	47	83%
		Hispanic	1	2	100%	-	-	-
		Total	**1,685**	**5,166**	**95.9%**	**1,725**	**4,488**	**90.2%**
		TOTAL	**10,894**	**38,379**	**92.9%**	**13,478**	**35,906**	**91.2%**

Table 14. All Vehicles Statewide Demographic Summary (Continued)

Demographic Data			All Vehicle Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	**Age**	**Race**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
Female	0-3	Caucasian	6	53	100%	11	47	93.6%
		African American	1	3	0%	1	6	100%
		Asian or Pacific Islander	1	8	100%	1	9	100%
		Total	**8**	**64**	**95.3%**	**13**	**62**	**95.2%**
	4-15	Caucasian	160	451	94.9%	193	537	92.2%
		African American	13	48	93.8%	29	125	94.4%
		Asian or Pacific Islander	2	3	100%	2	8	100%
		Hispanic	3	8	75%	1	9	100%
		Total	**178**	**510**	**94.5%**	**225**	**679**	**92.8%**
	16-29	Caucasian	1,902	7,323	94.6%	1,976	4,847	94%
		African American	385	2,524	92.8%	443	1,802	88%
		Asian or Pacific Islander	90	593	95.6%	38	149	91.9%
		Hispanic	17	49	98%	23	57	93%
		Total	**2,394**	**10,489**	**94.3%**	**2,480**	**6,855**	**92.4%**
	30-59	Caucasian	4,454	13,461	96%	6,042	15,224	96.3%
		African American	489	2,902	95.1%	763	3,098	92.8%
		Asian or Pacific Islander	92	562	96.4%	73	293	98.6%
		Hispanic	26	47	100%	35	111	100%
		Total	**5,061**	**16,972**	**95.9%**	**6,913**	**18,726**	**95.8%**
	60+	Caucasian	1,343	4,180	96%	1,380	3,357	96.2%
		African American	33	245	96.7%	57	267	93.3%
		Asian or Pacific Islander	2	3	100%	6	19	100%
		Hispanic	-	-	-	1	1	100%
		Total	**1,378**	**4,428**	**96.1%**	**1,444**	**3,644**	**96%**
	TOTAL		**9,019**	**32,463**	**95.3%**	**11,075**	**29,966**	**95%**

Table 15. Passenger Cars Statewide Demographic Summary

Demographic Data			Passenger Cars Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	**Age**	**Race**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
Male	0-3	Caucasian	-	-	-	5	40	100%
		Asian	1	11	0%	-	-	-
		Hispanic	-	-	-	1	6	100%
		Total	**1**	**11**	**0%**	**6**	**46**	**100%**
	4-15	Caucasian	66	163	95.7%	78	165	92.7%
		African American	8	37	83.8%	15	69	98.6%
		Asian or Pacific Islander	2	4	100%	4	17	82.4%
		Hispanic	1	3	100%	1	3	100%
		Total	**77**	**207**	**93.7%**	**98**	**254**	**93.7%**
	16-29	Caucasian	1,110	4,017	93.8%	1,310	3,144	92.9%
		African American	280	1,768	86.7%	324	1,326	75.1%
		Asian or Pacific Islander	45	281	99.6%	33	120	88.3%
		Hispanic	17	56	96.4%	23	66	98.5%
		Total	**1,452**	**6,122**	**92%**	**1,690**	**4,656**	**87.8%**
	30-59	Caucasian	1,941	6,748	94.3%	2,577	6,608	93.8%
		African American	308	1,981	88.2%	424	1,810	94.3%
		Asian or Pacific Islander	86	635	93.7%	42	206	80.1%
		Hispanic	18	50	100%	29	97	96.9%
		Total	**2,353**	**9,414**	**93%**	**3,072**	**8,721**	**93.6%**
	60+	Caucasian	772	2,592	96.3%	823	2,173	92%
		African American	24	111	92.8%	49	211	86.3%
		Asian or Pacific Islander	7	49	100%	7	45	82.2%
		Total	**803**	**2,752**	**96.3%**	**879**	**2,429**	**91.3%**
	TOTAL		**4,686**	**18,506**	**93%**	**5,745**	**16,106**	**91.6%**

Table 15. Passenger Cars Statewide Demographic Summary (Continued)

Demographic Data			Passenger Cars Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	**Age**	**Race**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
Female	0-3	Caucasian	2	40	100%	4	20	95%
		African American	1	3	0%	-	-	-
		Asian	1	8	100%	-	-	-
		Total	**4**	**51**	**94.1%**	**4**	**20**	**95%**
	4-15	Caucasian	65	184	94%	64	184	98.9%
		African American	8	35	91.4%	16	71	100%
		Asian or Pacific Islander	1	2	100%	-	-	-
		Hispanic	2	4	50%	1	9	100%
		Total	**76**	**225**	**92.9%**	**81**	**264**	**99.2%**
	16-29	Caucasian	1,223	4,673	94.6%	1,308	3,161	94.1%
		African American	269	1,753	93.3%	335	1,354	89.5%
		Asian or Pacific Islander	50	339	94.1%	28	112	100%
		Hispanic	10	30	96.7%	15	31	90.3%
		Total	**1,552**	**6,795**	**94.3%**	**1,686**	**4,658**	**92.9%**
	30-59	Caucasian	1,904	6,000	96.6%	2,631	6,729	96.2%
		African American	263	1,541	95.4%	464	1,918	92.8%
		Asian or Pacific Islander	56	398	95%	37	163	100%
		Hispanic	12	19	100%	13	56	100%
		Total	**2,235**	**7,958**	**96.3%**	**3,145**	**8,866**	**95.5%**
	60+	Caucasian	802	2,579	96.4%	867	2,193	95.8%
		African American	24	172	95.3%	45	219	91.8%
		Asian or Pacific Islander	2	3	100%	4	16	100%
		Hispanic	-	-	-	1	1	100%
		Total	**828**	**2,754**	**96.3%**	**917**	**2,429**	**95.5%**
	TOTAL		**4,695**	**17,783**	**95.4%**	**5,833**	**16,237**	**94.8%**

Table 16. Sport Utility Vehicles Statewide Demographic Summary

Demographic Data			Sport Utility Vehicle Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	**Age**	**Race**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
Male	0-3	Caucasian	-	-	-	2	17	100%
		Total	**-**	**-**	**-**	**2**	**17**	**100%**
	4-15	Caucasian	37	102	97.1%	38	111	88.3%
		African American	4	21	100%	11	46	100%
		Hispanic	-	-	-	2	3	0%
		Total	**41**	**123**	**97.6%**	**51**	**160**	**90%**
	16-29	Caucasian	319	1,252	93.2%	381	987	91.6%
		African American	51	318	81.8%	83	324	80.9%
		Asian or Pacific Islander	12	87	100%	5	15	100%
		Hispanic	6	14	100%	3	6	100%
		Total	**388**	**1,671**	**91.4%**	**472**	**1,332**	**89.1%**
	30-59	Caucasian	1,021	3,343	94.7%	1,391	3,576	95.1%
		African American	98	628	95.7%	144	590	96.6%
		Asian or Pacific Islander	20	153	100%	13	58	100%
		Hispanic	7	20	100%	14	25	84%
		Total	**1,146**	**4,144**	**95.1%**	**1,562**	**4,249**	**95.3%**
	60+	Caucasian	240	740	95.7%	190	474	92%
		African American	6	16	100%	6	24	100%
		Asian or Pacific Islander	1	2	100%	-	-	-
		Hispanic	1	2	100%	-	-	-
		Total	**248**	**760**	**95.8%**	**196**	**498**	**92.4%**
	TOTAL		**1,823**	**6,698**	**94.3%**	**2,283**	**6,256**	**93.6%**

Table 16. Sport Utility Vehicles Statewide Demographic Summary (Continued)

Demographic Data			Sport Utility Vehicle Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Female	0-3	Caucasian	1	10	100%	1	1	100%
		Asian or Pacific Islander	-	-	-	1	9	100%
		Total	**1**	**10**	**100%**	**2**	**10**	**100%**
	4-15	Caucasian	36	104	90.4%	47	129	84.5%
		African American	4	10	100%	3	19	63.2%
		Asian or Pacific Islander	1	1	100%	-	-	-
		Total	**41**	**115**	**91.3%**	**50**	**148**	**81.8%**
	16-29	Caucasian	399	1,596	94.2%	415	1,099	94.4%
		African American	56	343	92.1%	87	358	83.5%
		Asian or Pacific Islander	19	127	100%	5	17	29.4%
		Hispanic	5	15	100%	5	19	94.7%
		Total	**479**	**2,081**	**94.2%**	**512**	**1,493**	**91.1%**
	30-59	Caucasian	1,169	3,315	96.7%	1,709	4,397	96.6%
		African American	109	627	95.2%	161	641	88.9%
		Asian or Pacific Islander	20	78	100%	10	32	100%
		Hispanic	6	12	100%	10	19	100%
		Total	**1,304**	**4,032**	**96.6%**	**1,890**	**5,089**	**95.7%**
	60+	Caucasian	229	764	96.3%	177	421	97.1%
		African American	2	21	100%	5	16	100%
		Total	**231**	**785**	**93.8%**	**182**	**437**	**97.3%**
	TOTAL		**2,056**	**7,023**	**95.5%**	**2,636**	**7,177**	**94.5%**

Table 16. Vans/Minivans Statewide Demographic Summary

Demographic Data			Vans/Minivans Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	0-3	Caucasian	1	8	100%	1	9	100%
		Total	**1**	**8**	**100%**	**1**	**9**	**100%**
	4-15	Caucasian	40	113	98.2%	41	115	92.2%
		African American	2	6	100%	3	8	75%
		Asian or Pacific Islander	-	-	-	2	12	100%
		Hispanic	2	4	100%	1	1	0%
		Total	**44**	**123**	**98.4%**	**47**	**136**	**91.2%**
	16-29	Caucasian	159	574	90.1%	155	406	86.9%
		African American	34	177	88.1%	23	94	85.1%
		Asian or Pacific Islander	2	1	100%	7	36	100%
		Hispanic	2	7	100%	3	5	100%
		Total	**197**	**759**	**89.7%**	**188**	**541**	**87.6%**
	30-59	Caucasian	765	2,325	93%	1,043	2,717	92.9%
		African American	74	461	94.8%	147	613	94%
		Asian or Pacific Islander	19	130	95.4%	21	102	100%
		Hispanic	11	34	94.1%	13	32	84.4%
		Total	**869**	**2,950**	**93.4%**	**1,224**	**3,464**	**93.2%**
	60+	Caucasian	250	689	97.4%	292	735	90.2%
		African American	10	79	93.7%	10	34	100%`
		Asian or Pacific Islander	3	16	100%	-	-	-
		Total	**263**	**784**	**97.1%**	**302**	**769**	**90.6%**
	TOTAL		**1,374**	**4,624**	**93.4%**	**1,762**	**4,919**	**92.2%**

Table 17. Vans/Minivans Statewide Demographic Summary (Continued)

Demographic Data			Vans/Minivans Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Female	0-3	Caucasian	2	2	100%	4	23	100%
		African American	-	-	-	1	6	100%
		Total	**2**	**2**	**100%**	**5**	**29**	**100%**
	4-15	Caucasian	43	113	100%	60	180	96.1%
		African American	1	3	100%	8	23	100%
		Asian or Pacific Islander	-	-	-	2	8	100%
		Hispanic	1	4	100%	-	-	-
		Total	**45**	**120**	**100%**	**70**	**211**	**96.7%**
	16-29	Caucasian	139	550	94.2%	135	327	89.6%
		African American	41	276	93.1%	19	82	81.7%
		Asian or Pacific Islander	12	76	96.1%	4	17	100%
		Hispanic	2	4	100%	3	7	100%
		Total	**194**	**906**	**94%**	**161**	**433**	**88.7%**
	30-59	Caucasian	913	2,961	95.7%	1,158	2,903	96.4%
		African American	99	633	94.8%	115	448	96.9%
		Asian or Pacific Islander	12	48	100%	24	90	95.6%
		Hispanic	6	14	100%	9	24	100%
		Total	**1,030**	**3,656**	**95.6%**	**1,306**	**3,465**	**96.5%**
	60+	Caucasian	211	618	97.6%	251	589	97.5%
		African American	7	52	100%	3	8	100%
		Asian or Pacific Islander	-	-	-	2	3	100%
		Total	**218**	**670**	**97.8%**	**256**	**600**	**97.5%**
	TOTAL		**1,489**	**5,354**	**95.8%**	**1,798**	**4,737**	**96%**

Table 17. Pick-up Trucks Statewide Demographic Summary

Demographic Data			Pick-up Trucks Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	0-3	Caucasian	-	-	-	5	16	75%
		Total	**-**	**-**	**-**	**5**	**16**	**75%**
	4-15	Caucasian	46	102	95.1%	55	118	78.8%
		African American	-	-	-	3	16	25%
		Asian or Pacific Islander	-	-	-	2	2	100%
		Total	**46**	**102**	**95.1%**	**60**	**136**	**72.8%**
	16-29	Caucasian	482	1,595	91.2%	627	1,347	84.9%
		African American	43	276	83%	36	148	82.4%
		Asian or Pacific Islander	6	38	100%	-	-	-
		Hispanic	10	37	94.6%	11	19	100%
		Native American	-	-	-	1	2	100%
		Total	**541**	**1,946**	**90.2%**	**675**	**1,516**	**84.9%**
	30-59	Caucasian	1,941	5,033	90.9%	2,474	5,737	90.1%
		African American	82	451	89.8%	100	373	86.3%
		Asian or Pacific Islander	19	125	100%	2	2	100%
		Hispanic	11	24	87.5%	24	53	98.1%
		Total	**2,053**	**5,633**	**91%**	**2,600**	**6,165**	**89.9%**
	60+	Caucasian	364	840	94.5%	342	768	86.2%
		African American	6	28	78.6%	4	22	50%
		Asian	1	2	100%	2	2	100%
	Total		**371**	**870**	**94%**	**348**	**792**	**85.2%**
	TOTAL		**3,011**	**8,551**	**91.2%**	**3,688**	**8,625**	**88.3%**

Table 18. Pick-up Trucks Statewide Demographic Summary (Continued)

Demographic Data			Pick-up Trucks Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	**Age**	**Race**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**	**Actual Total # of Obs.**	**Weighted Total # of Obs.**	**Weighted % of SBU**
Female	0-3	Caucasian	1	1	100%	2	3	33.3%
		Total	**1**	**1**	**100%**	**2**	**3**	**33.3%**
	4-15	Caucasian	16	50	96%	22	44	68.2%
		African American	-	-	-	2	12	100%
		Total	**16**	**50**	**96%**	**24**	**56**	**75%**
	16-29	Caucasian	141	504	96.4%	118	260	96.5%
		African American	19	152	88.2%	2	8	100%
		Asian or Pacific Islander	9	51	94.1%	1	3	100%
		Total	**169**	**707**	**94.5%**	**121**	**271**	**96.7%**
	30-59	Caucasian	468	1,185	91.7%	544	1,195	95.9%
		African American	18	101	92.1%	23	91	100%
		Asian or Pacific Islander	4	38	100%	2	8	100%
		Hispanic	2	2	100%	3	12	100%
		Total	**492**	**1,326**	**92%**	**572**	**1,306**	**96.2%**
	60+	Caucasian	101	219	96.3%	85	154	93.5%
		African American	-	-	-	4	24	100%
		Total	**101**	**219**	**96.3%**	**89**	**178**	**94.4%**
	TOTAL		**779**	**2,303**	**93.2%**	**808**	**1,814**	**95.3%**

6.2 Program Comparisons

Table 19 summarizes the findings of the 2005, 2006 and 2007 safety belt observational surveys for the *Click It or Ticket* Mobilization. As seen in the table, the actual number of observations increases every year, except for the 2006 statewide pre-enforcement wave. The number of weighted observations was greater for all observational waves in 2007 as compared to 2006 and 2005. The 2007 statewide pre-enforcement observational surveys had an improvement over the same wave of 2005 and 2006. The 2007 statewide post-enforcement observational survey decreased slightly from the same wave in 2006 and increased from the same wave in 2005.

Table 19. 2005, 2006 and 2007 Comparison

Observational Survey	Statewide Pre-Enforcement			Statewide Post-Enforcement		
	2005	2006	2007	2005	2006	2007
No. of Sites	192	192	192	192	192	192
Actual No. of Observations	19,382	18,262	19,913	16,981	20,472	24,553
Weighted No. of Observations	36,021	64,401	70,842	36,842	63,821	65,872
Safety Belt Use Percent	89.4%	89.9%	93%	92.9%	94%	93.3%

Based upon the safety belt use rate trends shown in Figure 2, continued efforts in the media and with enforcement may reduce the variation between the annual *Click It or Ticket* Enforcement campaigns. Continued monitoring of the media and enforcement efforts will ensure adequate behavioral modifications are maintained throughout the year.

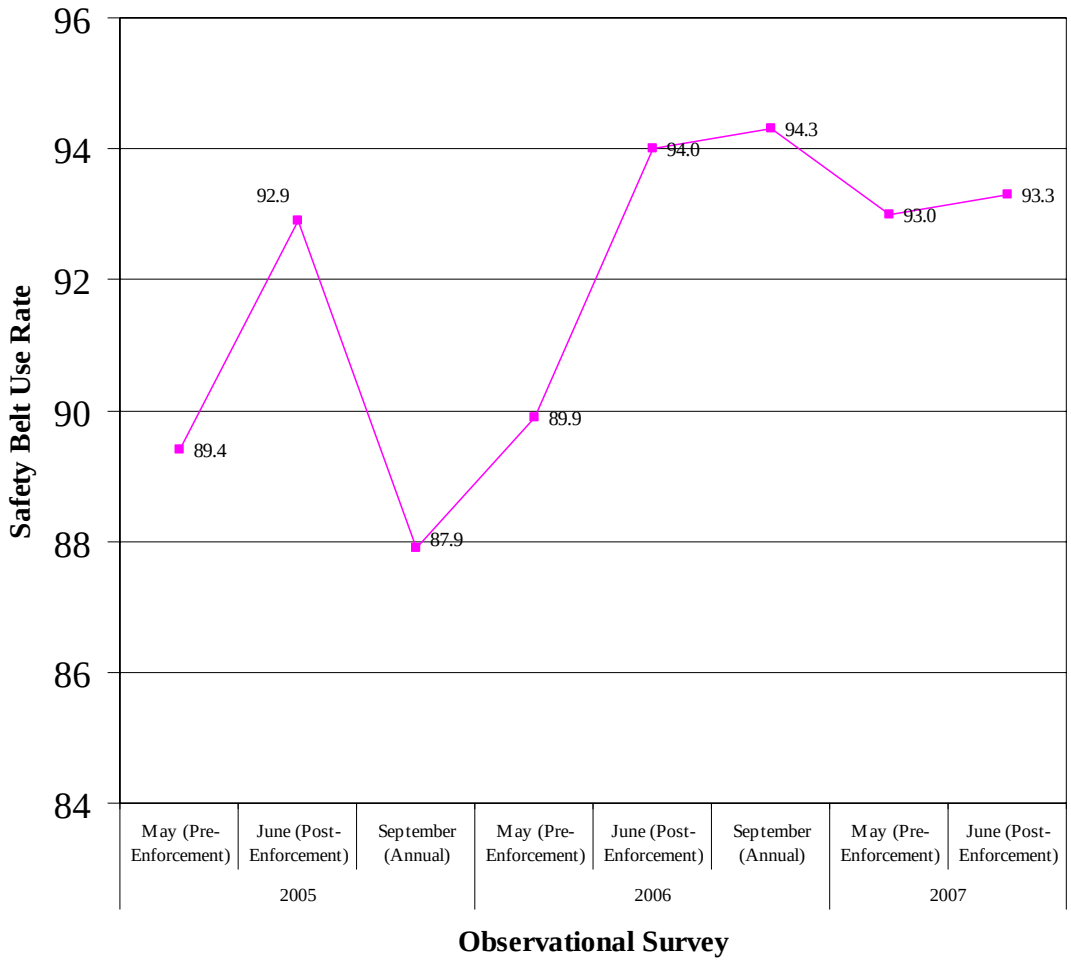

Figure 2. 2005 Through 2007 Safety Belt Use Rate Trends

6.3 Program Enhancements

As shown in the findings from the various observational surveys, males and pick-up drivers should be targeted in future *Click It or Ticket* campaigns. Continuing programs in urban areas should impact African American occupants while targeting a substantial portion of the state's population. This would indicate that continuing programs in urban centers may improve safety belt use rates.

With the current success rate of the *Click It or Ticket* campaign, the future potential of improving the safety belt use rate may yield a lower rate of increase. Future programs may focus on targeted areas where the safety belt use rates are still relatively low. For instance, Stratum 1 has a consistently high safety belt use rate, whereas areas of Stratum 3 or Stratum 4 have lower rates.

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APPENDIX I – COMPLETE LISTING OF THE OBSERVATIONAL SITES IN MICHIGAN

STRATUM 1	
County	**Location No.**
Ingham County	1. M-106 and M-52
	2. Lake Lansing and Hagadorn
	3. Barnes and Eden
	4. Michigan and Waverly
	5. M-43 and M-52
	6. M-106 and M-52
	7. Barry and Zimmer
	8. Tihart and Cornell
	9. Holt and M-52
	10. Cavannah and Pennsylvania
	11. Rossman and Onodaga
	12. I-496 and Dunkel
	13. Cedar and US-127
	14. US-127 and Saginaw
Kalamazoo County	1. M-43 and 9th
	2. M-89 and 43rd
	3. H Ave and 30th
	4. K Drive and M-66
	5. AB and M-89
	6. M-89 and 42nd
	7. G and Riverview
	8. S Ave and 8th
	9. S Ave and Sprinkle
	10. W Ave. and 2nd
Oakland County	1. Taft and 9 Mile
	2. Northwestern and Middlebelt
	3. Clarkston and Baldwin
	4. Snell and Rochester
	5. 14 Mile and Main
	6. Holly and Grange Hall
	7. Grand River and Taft
	8. I-696 and Orchard Lake
	9. M-10 and 8 Mile
	10. I-696 and Woodward
	11. Walton and Lapeer
	12. Dixie and Davisburg
	13. I-75 and Sashabaw

Washtenaw County	1. Ann Arbor and East Main
	2. Saline-Milan and Mooreville
	3. Mooreville and Stony Creek
	4. Dixboro and North Territorial
	5. Austin and Schneider
	6. Geddes and Earhart
	7. Zeeb and North Territorial
	8. I-94 and Jackson
	9. I-94 and Huron/Whitaker
	10. I-94 and State
	11. Miller and Maple
STRATUM 2	
County	**Location No.**
Allegan County	1. 102nd and 42nd
	2. 30th and 134th
	3. US-131 and 135th
	4. M-89 and US-131
Bay County	1. M-61 and Standish
	2. Kochville and Westervelt
	3. Finn and Munger
	4. I-75 and Pinconning
Eaton County	1. M-43 and Canal
	2. M-43 and M-50
	3. Nixon and Willow
	4. Royston and Island Highway
	5. Ainger and Battle Creek
	6. I-96 and Nash
	7. Battle Creek and Kalamo
	8. Washington and Lawrence
Grand Traverse County	1. M-72 and US-31
Jackson County	1. Rosehill and Elm
	2. Wolf Lake and Cady
	3. Michigan and Lake
	4. Michigan and US-127
	5. US-127 and Page
Kent County	1. 4 Mile and Walker
	2. Sparta and Ball Creek
	3. US-131 and 10 Mile
	4. US-131 and 84th
	5. US-131 and 68th
	6. 10 Mile and Wabasis
	7. 14 Mile and Harvard
	8. 17 Mile and Myers Lake

Livingston County	1. Grand River and Pleasant Valley
	2. M-36 and Dexter
	3. M-36 and M-106
	4. I-96 and Kensington
	5. US-23 and Clyde
	6. Old US-23 and M-59
Macomb County	1. Jefferson and Martin
	2. 22 Mile and Heydenreich
	3. Moravian and Harrington
	4. 27 Mile and Romeo Plank
	5. 34 Mile and Van Dyke
	6. 23 and Van Dyke
	7. I-696 and Groesbeck
Midland County	1. Redstone and 11 Mile
	2. Pine River and Badour
	3. Curtis and Lake Sanford
	4. Redstone and Coleman
	5. M-20 and Homer
Ottawa County	1. Lake Michigan and 136th
	2. Polk and 104th
STRATUM 3	
County	**Location No.**
Berrien County	1. Pipestone and Naomi
	2. Lakeside and Union Pier
	3. I-94 and M-139
Calhoun County	1. 15 Mile and Michigan
	2. Evanston and Michigan
	3. B Drive and Beadle Lake
	4. I-94 and 5 Mile
Clinton County	1. M-21 and Lowell
	2. M-21 and Shepardsville
	3. Hyde and Welling
	4. Main and Westphalia
	5. Clark and Upton
Genesee County	1. M-57 and Vassar
	2. Flushing and Ballenger
	3. Grand Blanc and Duffield
	4. Beecher and N Elms
	5. Mt. Morris and I-75
	6. I-475 and Court

Ionia County	1. Zahm and State
	2. Clarksville and Main
Isabella County	1. Blanchard and Winn
Lapeer County	1. M-24 and Coulter
	2. Otter Lake and Klam
Lenawee County	1. US-12 and Brooklyn
	2. Clinton Macon and Mills Macon
	3. M-50 and Pentecost Hwy
Marquette County	1. M-95 and Cr-LLK
	2. Washington and McClellan
Monroe County	1. Ostrander and Tuttle Hill
	2. Ostrander and Bunce
	3. Hull and Dunbar
	4. US-23 and US-223
	5. US-23 and Dixon
	6. US-23 and Plank
Montcalm County	1. Condensary and Crystal
	2. Sidney and Crystal
	3. M-91 and Sidney
Muskegon County	1. Blackmer and Ravenna
	2. Ravenna Heights and Maple Island
	3. Moorland and Ravenna Heights
Saginaw County	1. M-57/Fergus and Bishop
Shiawasee County	1. Grand River and M-52
	2. Juddville and Chipman
	3. I-69 and M-52
St. Clair County	1. Lambs and M-19
	2. Perch and M-29
	3. I-69 and Riley Center
St. Joseph County	1. Millard and US-131
	2. Banker and Klingor
Van Buren County	1. CR-681 and CR-384
	2. CR-380 and CR-681
	3. M-51 and CR-352
	4. I-196 and Phoenix

STRATUM 4	
County	**Location No.**
Wayne County	1. McNichols and Evergreen
	2. Telegraph and Northline
	3. Haggerty and Ecorse
	4. Wick and Wayne
	5. Eureka and Telegraph
	6. Woodward and Warren
	7. Palmer and Lilley
	8. Geddes and Canton Center
	9. Ecorse and Monroe
	10. Michigan and Greenfield
	11. Eureka and Middlebelt
	12. 7 Mile and Van Dyke
	13. Farmington and Plymouth
	14. Van Dyke and Davison
	15. Vernier and Mack
	16. Van Horn and Inkster
	17. Outer Drive and Rotunda Village
	18. Annapolis and Wayne
	19. 8 Mile and Randolph
	20. Plymouth and Greenfield
	21. Goddard and Fort
	22. Grand River and 8 Mile
	23. 9 Mile and Greenfield
	24. Ford and Sheldon
	25. Vernier and Mack
	26. I-96 and Middlebelt
	27. I-96 and Livernois
	28. Warren and Southfield
	29. Randolph and Jefferson
	30. Greenfield and M-10
	31. Northline and I-75
	32. Schaefer and Grand River
	33. I-94 and Harper (Vernier)
	34. I-75 and Southfield
	35. Huron River and Sibley
	36. Rawsonville and Textile
	37. Main and Sumpter
	38. Sumpter and Oakville Waltz
	39. Waltz and Willow
	40. Savage and Haggerty/Bemis
	41. Rawsonville and Textile

APPENDIX II – STATEWIDE SAFETY BELT USE RATES BY COUNTY

Stratum and County	Pre-Enforcement Statewide Safety Belt Rate		Post-Enforcement Statewide Safety Belt Use Rate	
	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error
Stratum 1	92.4% ± 1.55%	0.79%	94.3% ± 1.18%	0.60%
Ingham County	93.9% ± 1.70%	0.86%	94.5% ± 1.70%	0.86%
Kalamazoo County	95.2% ± 2.13%	1.09%	93.6% ± 1.58%	0.80%
Oakland County	89.6% ± 2.61%	1.33%	92.1% ± 1.66%	0.85%
Washtenaw County	93.9% ± 1.65%	0.84%	96.6% ± 2.05%	1.05%
Stratum 2	93.7% ± 1.26%	0.64%	94.4% ± 0.77%	0.39%
Allegan County	93.4% ± 0.88%	0.45%	94.9% ± 1.59%	0.81%
Bay County	90.3% ± 2.50%	1.28%	92.0% ± 9.04%	4.61%
Eaton County	95.0% ± 0.85%	0.43%	96.9% ± 0.99%	0.50%
Grand Traverse County	92.9%	N/A	96.9%	N/A
Jackson County	91.1% ± 3.26%	1.66%	95.5% ± 2.63%	1.34%
Kent County	91.6% ± 2.05%	1.04%	94.2% ± 0.92%	0.47%
Livingston County	93.0% ± 1.35%	0.69%	93.3% ± 0.29%	0.15%
Macomb County	96.7% ± 0.53%	0.27%	94.1% ± 1.13%	0.58%
Midland County	88.8% ± 1.79%	0.91%	88.7% ± 10.24%	5.22%
Ottawa County	87.5% ± 2.76%	1.41%	96.7% ± 0.68%	0.34%
Stratum 3	90.5% ± 2.03%	1.04%	92.7% ± 1.59%	0.81%
Berrien County	88.1% ± 1.62%	0.83%	95.7% ± 1.30%	0.66%
Calhoun County	94.3% ± 2.40%	1.23%	97.3% ± 2.14%	1.09%
Clinton County	89.9% ± 6.12%	3.12%	94.2% ± 2.53%	1.29%
Genesee County	82.5% ± 3.26%	1.67%	94.0% ± 1.64%	0.84%
Ionia County	78.7% ± 24.33%	12.41%	86.1% ± 7.53%	3.84%
Isabella County	82.7%	N/A	77.5%	N/A
Lapeer County	92.1% ± 0.75%	0.38%	88.5% ± 3.86%	1.97%
Lenawee County	95.2% ± 2.37%	1.21%	80.8% ± 3.75%	1.91%
Marquette County	91.3% ± 2.06%	1.05%	94.9% ± 1.31%	0.67%
Monroe County	93.7% ± 1.51%	0.77%	92.3% ± 2.15%	1.10%
Montcalm County	82.9% ± 6.36%	3.24%	84.1% ± 3.75%	1.91%
Muskegon County	87.9% ± 10.15%	5.18%	93.6% ± 1.23%	0.63%
Saginaw County	94.8%	N/A	91.7%	N/A
Shiawassee County	93.0% ± 8.91%	4.55%	96.5% ± 3.72%	1.90%
St. Clair County	93.3% ± 1.25%	0.64%	95.5% ± 3.40%	1.74%
St. Joseph County	95.7% ± 1.98%	1.01%	94.8% ± 0.30%	0.15%
Van Buren County	93.4% ± 3.00%	1.53%	94.1% ± 3.94%	2.01%
Stratum 4 - Wayne County	95.9% ± 0.92%	0.47%	91.3% ± 1.02%	0.52%

* Weighted Safety Belt Usage ± 95% Confidence Band

APPENDIX III – STATEWIDE SAFETY BELT USE RATES BY INTERSECTION

All Vehicle Safety Belt Use								
Stratum, County and Intersection	Statewide Pre-Enforcement				Statewide Post-Enforcement			
	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Stratum 1								
Ingham County								
US-127 & Saginaw	135	149	410	456	80	85	705	741
Barnes & Eden	51	55	51	55	147	158	191	205
Barry & Zimmer	56	62	30	33	58	61	128	136
Cavannah & Pennsylvania	112	115	213	219	82	89	498	541
Cedar & US-127	94	97	210	217	250	267	380	406
Holt & M-52	55	57	37	38	82	85	85	88
I-496 & Dunkel	140	147	481	506	66	66	556	557
Lake Lansing & Hagadorn	75	79	145	152	68	72	248	264
M-106 & M-52	188	203	329	362	297	320	298	322
M-43 & M-52	143	149	274	285	91	93	119	122
Michigan & Waverly	128	135	443	467	78	81	877	912
Putnam & M-43	72	76	120	127	73	77	541	571
Rossman & Onodaga	56	60	72	79	121	142	196	230
Tihart & Cornell	78	84	62	67	54	59	149	163
Total	**1,383**	**1,468**	**2,877**	**3,063**	**1,547**	**1,655**	**4,971**	**5,258**
Kalamazoo County								
AB & M-89	85	88	196	203	149	155	166	173
G & Riverview	102	104	234	239	219	237	325	352
H Ave & 30th	79	88	83	92	134	141	161	169
K Drive & M-66	71	72	233	237	196	214	280	306
M-43 & 9th	91	96	213	225	247	260	386	406
M-89 & 42nd	77	81	164	175	204	211	319	330
M-89 & 43rd	80	82	188	192	208	218	302	316
S Ave & Sprinkle	100	108	255	281	183	202	314	347
S Ave & 8th	56	57	55	56	118	129	111	120
W Ave & 2nd	54	60	59	65	59	69	51	60
Total	**795**	**836**	**1,680**	**1,765**	**1,717**	**1,836**	**2,415**	**2,579**
Oakland County								
14 Mile & Main	126	134	514	546	109	122	466	522
8 Mile & M-10	87	100	702	806	138	149	320	345
9 Mile & Taft	63	73	59	68	101	104	188	194
Clarkston & Baldwin	92	95	133	138	116	125	323	349
Dixie & Davisburg	101	112	155	173	128	145	223	253

Grand River & Taft	76	87	579	677	129	137	246	260
Holly & Grange Hall	107	114	514	549	107	116	363	393
I-696 & Orchard Lake	70	81	676	791	114	122	190	204
I-696 & Woodward	55	65	371	439	104	107	400	412
I-75 & Sashabaw	107	112	328	344	94	109	277	321
Northwestern & Middlebelt	67	75	442	494	130	139	415	443
Shell & Rochester	114	118	456	473	89	96	344	371
Walton & Lapeer	102	115	310	353	112	124	392	433
Total	**1,167**	**1,281**	**5,239**	**5,851**	**1,471**	**1,595**	**4,147**	**4,500**
Washtenaw County								
Ann Arbor & East Main	63	77	116	147	75	75	1,205	1,205
Austin & Schneider	46	54	61	73	60	64	46	49
Geddes & Earhart	71	72	242	246	67	72	190	205
I-94 & Huron/Whittaker	67	72	398	428	56	58	511	529
I-94 & Jackson	142	149	1,086	1,138	121	124	786	805
I-94 & State	186	197	1,414	1,497	127	133	848	888
Mooreville & Stoney Creek	140	150	316	339	54	56	140	145
Maple & Miller	112	115	269	276	106	112	390	413
North Territorial & Dixboro	137	146	238	254	110	117	184	195
North Territorial & Zeeb	34	34	59	59	62	65	150	157
Saline-Milan & Mooreville	48	57	91	112	49	55	200	224
Total	**1,046**	**1,123**	**4,290**	**4,569**	**887**	**931**	**4,650**	**4,815**
Stratum 2								
Allegan County								
102nd & 42nd	58	62	53	57	63	67	80	86
30th & 134th	61	65	175	189	134	144	184	197
M-89 & US-131	135	142	377	404	262	273	173	181
US-131 & 135th	86	91	232	246	190	198	204	211
Total	**340**	**360**	**837**	**896**	**649**	**682**	**641**	**675**
Bay County								
Finn & Munger	58	62	41	44	58	67	63	74
I-75 & Pinconning	92	99	81	88	119	126	175	184
Kochville & Westervelt	48	57	32	38	84	90	86	92
M-61 & Standish	85	94	76	84	69	76	94	104
Total	**283**	**312**	**230**	**254**	**330**	**359**	**418**	**454**

Eaton County								
Ainger & Battle Creek	68	72	82	88	53	54	130	132
I-96 & Nash	77	81	95	100	95	100	87	92
Battle Creek & Kalamo	85	87	135	138	68	69	200	203
M-43 & Canal	119	125	546	578	117	123	302	317
M-50 & M-43	97	101	94	97	116	119	196	201
Royston & Island Hwy	77	81	179	190	114	115	118	119
Washington & Lawrence	82	86	103	108	122	126	406	420
Willow & Nixon	75	78	92	96	99	103	139	144
Total	**680**	**711**	**1,326**	**1,395**	**784**	**809**	**1,578**	**1,628**
Grand Traverse County								
M-72 & M-31	195	208	570	614	190	196	759	783
Total	**195**	**208**	**570**	**614**	**190**	**196**	**759**	**783**
Jackson County								
Michigan & US-127	230	252	289	318	92	100	142	154
Michigan & Lake	164	189	231	266	138	141	144	147
Rosehill & Elm	143	144	156	157	110	118	96	103
US-127 & Page	182	200	298	328	220	226	427	439
Wolf Lake & Cady	66	73	88	97	75	82	85	93
Total	**785**	**858**	**1,062**	**1,166**	**635**	**667**	**894**	**936**
Kent County								
14 Mile & Harvard	84	91	127	139	141	150	350	371
4 Mile & Walker	163	171	309	324	151	164	194	211
US 131 & 84th	134	153	203	232	191	205	367	389
US-131 & 68th	64	68	68	72	168	179	585	624
10 Mile & Wabasis	112	121	172	186	108	110	188	193
Myers Lake & 17 Mile	116	122	222	234	125	133	133	142
Sparta & Ball Creek	223	240	463	500	138	144	317	332
US-131 & 10 Mile	217	242	815	909	73	78	340	363
Total	**1,113**	**1,208**	**2,379**	**2,596**	**1,095**	**1,163**	**2,474**	**2,625**
Livingston County								
Grand River & Pleasant Valley	113	117	220	229	159	171	98	106
I-96 & Kensington	128	140	184	203	127	137	143	154
M-36 & Dexter	65	69	72	78	62	67	43	47
M-36 & M-106	80	85	161	170	66	71	47	52
Old US-23 & M-59	187	202	601	649	242	259	716	763
US-23 & Clyde	61	68	69	77	76	81	115	123
Total	**634**	**681**	**1,307**	**1,406**	**732**	**786**	**1,162**	**1,245**

Macomb County								
22 Mile & Heydenreich	90	94	226	237	188	204	364	394
27 Mile & Romeo Plank	69	70	106	109	106	112	253	266
Groesbeck & I-696	127	130	1,582	1,632	181	194	754	807
Jefferson & Martin	112	116	411	429	154	166	326	350
Moravian & Harrington	96	97	247	249	170	176	278	290
Van Dyke & 23 Mile	115	119	1,033	1,069	220	228	374	386
34 Mile & Van Dyke	75	78	276	292	190	202	497	532
Total	**684**	**704**	**3,881**	**4,017**	**1,209**	**1,282**	**2,846**	**3,025**
Midland County								
Lake Sanford & Curtis	62	69	43	47	53	64	73	88
M-20 & Homer	58	65	39	44	111	114	190	196
Redstone & Coleman	77	85	79	86	44	68	53	82
Pine River & Badour	52	59	47	53	71	75	115	121
Redstone & 11 Mile	83	95	72	83	60	67	89	99
Total	**332**	**373**	**278**	**313**	**339**	**388**	**520**	**586**
Ottawa County								
Lake Michigan & 136th	82	95	102	119	82	85	98	102
Polk & 104th	58	65	73	81	82	85	28	29
Total	**140**	**160**	**175**	**200**	**164**	**170**	**126**	**131**
Stratum 3								
Berrien County								
I-94 & M-139	167	186	235	265	106	110	393	408
Lakeside Rd & Union Pier	74	84	84	95	65	70	40	43
Pipestone & Naomi	74	86	58	68	90	95	129	136
Total	**315**	**356**	**377**	**428**	**261**	**275**	**562**	**587**
Calhoun County								
15 Mile & Michigan	106	115	78	83	83	87	79	83
B Drive & Beadle Lake	107	110	292	300	104	109	224	233
Michigan & Evanston	147	155	360	383	118	119	339	342
I-94 & 5 Mile	128	139	296	322	128	132	179	186
Total	**488**	**519**	**1,026**	**1,088**	**433**	**447**	**821**	**844**
Clinton County								
Clark & Upton	66	69	62	65	77	79	53	54
Hyde & Welling	61	69	101	114	61	68	32	36
M-21 & Lowell	107	111	91	95	82	86	94	98
Shepardsville & M-21	66	70	109	115	113	118	212	223
Westphalia & Main	129	155	152	184	80	88	120	131
Total	**429**	**474**	**515**	**573**	**413**	**439**	**511**	**542**

Genesee County								
Ballenger & Flushing	50	68	129	176	134	143	510	544
N Elms & Beacher	49	60	158	197	124	129	372	387
Grand Blanc & Duffield	50	55	76	83	91	98	152	164
I 475 & Court	93	113	598	726	105	115	328	359
M-57 & Vassar	58	61	105	110	84	89	116	123
Mt. Morris & I-75	53	64	159	192	98	102	175	182
Total	**353**	**421**	**1,225**	**1,484**	**636**	**676**	**1,653**	**1,759**
Ionia County								
Clarksville & Main	37	56	47	71	49	61	84	105
Zahm & State	60	65	67	73	97	109	188	211
Total	**97**	**121**	**114**	**144**	**146**	**170**	**272**	**316**
Isabella County								
Blanchard & Winn	43	52	56	68	69	89	145	186
Total	**43**	**52**	**56**	**68**	**69**	**89**	**145**	**186**
Lapeer County								
M-24 & Coutler	136	148	555	604	81	90	221	245
Otter Lake & Klam	29	31	87	93	77	90	104	122
Total	**165**	**179**	**642**	**697**	**158**	**180**	**325**	**367**
Lenawee County								
Clinton Macon & Mills Macon	82	85	98	102	58	65	77	86
M-50 & Pentecost Hwy	107	111	136	142	53	66	157	195
US-12 & Brooklyn	115	124	107	115	45	57	270	342
Total	**304**	**320**	**341**	**359**	**156**	**188**	**504**	**623**
Marquette County								
Washington & McClellan	203	224	593	654	158	168	118	126
M-95 & CR-LLK	111	118	142	151	147	154	188	197
Total	**314**	**342**	**735**	**805**	**305**	**322**	**306**	**323**
Monroe County								
Hull & Dunbar	111	120	118	128	99	111	248	279
Ostrander & Bunce	60	65	44	48	68	74	154	167
Ostrander & Tuttle Hill	89	96	106	115	85	92	86	93
US-23 & US-233	167	176	396	416	87	92	285	302
US-23 & Plank	89	95	85	92	76	81	115	123
US-23 & Dixon	66	70	26	28	63	68	145	155
Total	**582**	**622**	**775**	**827**	**478**	**518**	**1,033**	**1,119**
Montcalm County								
Crystal & Sidney	41	54	49	64	69	84	132	161
Condensary & Crystal	49	61	73	91	76	92	106	128
M-91 & Sidney	47	53	145	167	69	78	105	118
Total	**137**	**168**	**267**	**322**	**214**	**254**	**343**	**407**

Muskegon County								
Moorland & Ravenna Heights	54	67	49	60	72	78	68	74
Ravenna & Blackmer	65	77	113	136	86	92	99	106
Ravenna Heights & Maple Island	73	75	110	113	88	93	112	118
Total	**192**	**219**	**272**	**309**	**246**	**263**	**279**	**298**
Saginaw County								
M-57/Fergus & Bishop	73	77	35	37	55	60	70	77
Total	**73**	**77**	**35**	**37**	**55**	**60**	**70**	**77**
St. Clair County								
Riley Center & I-69	86	96	78	87	69	75	69	75
M-19 & Lambs	110	117	229	243	100	108	161	174
M-29 & Perch	147	157	405	433	145	149	419	431
Total	**343**	**370**	**712**	**763**	**314**	**332**	**649**	**680**
St. Joseph County								
Banker & Klingor	59	69	34	40	53	58	28	33
Milliard & US-131	126	131	737	766	130	137	901	947
Total	**185**	**200**	**771**	**806**	**183**	**195**	**929**	**980**
Shiawassee County								
M-52 & Grand River	50	60	50	61	140	142	252	256
M-52 & I-69	65	66	174	176	77	79	112	114
Juddville & Chipman	46	52	75	85	142	153	161	174
Total	**161**	**178**	**299**	**322**	**359**	**374**	**525**	**544**
Van Buren County								
CR-681 & CR-384	58	59	86	87	138	158	165	187
CR-681 & CR-380	59	64	75	81	118	128	112	124
I-196 & Phoenix	129	139	290	317	311	322	712	737
M-51 & CR-352	68	71	104	109	202	218	251	270
Total	**314**	**333**	**555**	**594**	**769**	**826**	**1,240**	**1,318**
Stratum 4								
Wayne County								
7 Mile & Van Dyke	127	142	984	1,109	174	190	1,031	1,113
8 Mile & Randolph	106	111	424	444	104	110	347	367
Annapolis & Wayne	107	110	681	700	116	126	608	660
Ecorse & Monroe	114	120	748	794	102	114	755	844
Ecorse & Haggerty	105	106	742	749	204	218	487	521
Eureka & Middlebelt	115	117	789	802	144	160	829	919
Evergreen & McNichols	117	129	585	645	138	162	529	621
Farmington & Plymouth	108	113	941	984	116	126	671	730
Ford & Sheldon	107	109	675	687	182	190	465	485
Fort & Goddard	99	101	1,082	1,104	128	136	682	725

Geddes & Canton Center	132	134	904	918	212	226	553	589
Grand River & 8 Mile	123	130	1,239	1,310	152	164	495	535
Grand River & Schaefer	128	135	775	823	128	154	708	851
Greenfield & 9 Mile	102	105	1,045	1,075	170	180	665	703
Greenfield & M-10	69	72	317	331	152	164	492	530
Huron River & Sibley	97	101	188	195	112	118	239	248
North Line & I-75	98	102	1,075	1,129	190	206	679	735
I-75 & Southfield	96	101	1,244	1,309	102	108	529	560
I-94 & Harper (Vernier)	110	118	1,082	1,161	140	146	644	671
Middlebelt & I-96	114	116	1,155	1,176	256	276	816	884
I-96 & Livernois	129	132	1,314	1,345	164	184	738	828
Inkster & Van Horn	112	118	1,222	1,298	144	152	250	266
Jefferson & Randolph	116	120	710	735	174	186	757	810
Michigan & Greenfield	113	113	1242	1,242	160	172	838	900
Outer Drive & Rotunda Village	128	129	303	306	170	188	966	1,057
Palmer & Lilley	130	150	631	742	100	112	266	298
Plymouth & Greenfield	129	133	442	456	160	190	597	701
Rawsonville & Textile	95	98	138	142	216	234	234	260
Savage & Haggerty/Bemis	68	71	129	135	100	114	165	188
Sumpter & Oakville Waltz	120	124	410	424	34	40	124	146
Sumpter & Main	120	124	1,296	1,339	156	164	347	365
Telegraph & Eureka	108	113	1,202	1,257	172	188	978	1,081
Telegraph & Northline	123	128	333	347	116	132	415	472
Van Dyke & Davison	86	88	244	250	124	132	657	698
Van Horn & Inkster	112	115	525	539	144	152	374	405
Vernier & Lake Shore Drive	110	114	1,043	1,081	90	94	378	395
Vernier & Mack	79	85	195	210	160	176	659	731
Waltz & Willow	121	125	1,687	1,742	64	74	112	129
Warren & Southfield	105	106	418	422	170	194	1,061	1,211
Wayne & Wick	89	93	287	299	94	110	180	211
Woodward & Warren	123	128	1,292	1,355	160	164	1,121	1,219
Total	**4,490**	**4,679**	**31,738**	**33,111**	**5,894**	**6,426**	**23,441**	**25,662**